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РОЛЬ ФАКТОРОВ ИММУННОЙ РЕАКТИВНОСТИ В ПАТОГЕНЕЗЕ КЛИНИЧЕСКИХ ПРОЯВЛЕНИЙ РИНОСИНУСИТА.

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Клинические проявления заболеваний отражают уровень иммунной реактивности. Боль при риносинусите можно рассматривать как проявление универсального защитного механизма. Цель исследования: определение роли факторов иммунной реактивности в патогенезе болевого симптома при риносинусите. Обследовано 240 больных риносинуситами. В 1 группу вошли больные с острым вирусным риносинуситом. Во 2 группу вошли больные с острым гнойными синуситами. Всем проведено полное клиническое и иммунологическое обследование, определение уровней цитокинов IL-1 β , IL-4, IL-6, IL-8, IL-10, TNF α , INF γ и субстанции Р. Иммунологическое исследование проводили в зависимости от выраженности болевого симптома и уровня субстанции Р. При типичном болевом симптоме (100 < SP < 2000 пг/мл) изменения показателей иммунограммы были характерны для нормального иммунного ответа на инфекционный антиген. У больных при SP > 2000 пг/мл показатели иммунограммы свидетельствуют о цитотоксическом варианте иммунного ответа на фоне дефицита гуморального звена и фагоцитоза. При SP < 100 пг/мл показатели иммунограммы выявили иммунодефицит по всем направлениям. Выводы: Определение уровня субстанции Р в сыворотке крови больного является критерием объективной оценки болевого симптома при риносинуситах, его значение в пределах 100 - 2000 пг/мл свидетельствует о нормальном нейро-иммунном взаимодействии. Выраженный болевой симптом при риносинусите свидетельствует о нейрогенном воспалении, смещении баланса активности Th1-/Th2-лимфоцитов в сторону Th-1 и недостаточности иммунного ответа. Отсутствие болевого симптома при риносинусите свидетельствует о нарушении нейро-иммунной регуляции, при этом направленность дифференцировки Th-1/Th-2 лимфоцитов в сторону Th-2-пути, что проявляется иммунной недостаточностью.

Ключевые слова: риносинусит; болевой симптом; иммунодефицит; субстанция Р.

ROLE OF IMMUNE REACTIVITY FACTORS IN PATHOGENESIS OF RHINOSINUSITIS CLINICAL MANIFESTATIONS .

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Clinical manifestations of a disease reflect the level of immune reactivity. Pain syndrome in rhinosinusitis can be regarded to as a manifestation of universal protective mechanism. Purpose of the study: to determine the role of immune reactivity factors in the pathogenesis of pain syndrome in rhinosinusitis. Materials and Methods: the study included 240 patients with rhinosinusitis. In group 1 patients with acute viral rhinosinusitis were included. The 2nd group consisted of patients with acute bacterial sinusitis. All patients underwent complete clinical and immunological examination with detection of cytokines IL-1 β , IL- 4, IL- 6, IL- 8, IL- 10, TNF α , INF γ and substance P levels. Results: the immunological study was carried out depending on the severity of pain and level of substance P. In a typical pain syndrome (100 <SP < 2000 pg / mL) changes in immunogram indicators were typical for a normal immune response to infectious antigen. In patients with SP> 2000 pg / ml immunogram indicators showed cytotoxic variant of immune response against backdrop of humoral deficiency and phagocytosis. When SP was less than 100 pg / mL immunogram indicators showed immunodeficiency in all directions. Conclusions: serum levels of substance P is an objective measure of pain in patients with rhinosinusitis. Its' values in the range of 100 to 2000 pg / mL indicate a normal neuro - immune interaction. Severe pain in rhinosinusitis indicates a neurogenic inflammation, Th1- / Th2- lymphocytes activity balance displacement towards Th- 1 response and immune deficiency. The absence of pain syndrome in rhinosinusitis indicates a violation of neuro - immune regulation, with the direction of Th- 1 / Th- 2 lymphocytes differentiation towards Th- 2 pathway, which leads to immune deficiency.

Keywords: rhinosinusitis; facial pain; immunodeficiency; substance P.

ТРАНСТРАХЕАЛЬНАЯ СТРУЙНАЯ ВЕНТИЛЯЦИЯ В ЭНДОСКОПИЧЕСКОЙ ХИРУРГИИ ГОРТАНИ

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Транстрахеальная струйная вентиляция легких применяется более 40 лет. Простота методики позволила эффективно использовать её в эндоскопической хирургии верхних дыхательных путей, при выполнении челюстно-лицевых операций, оказании неотложной помощи при острой дыхательной недостаточности на догоспитальном этапе, а также для респираторной поддержки при трудной интубации. Опыт использования в нашей клинике транстрахеальной струйной вентиляции при эндоскопической микрохирургии гортани насчитывает более 1000 наблюдений, поэтому можно говорить не только о несомненных достоинствах, но и недостатках этого метода респираторной поддержки. На наш взгляд, одним из путей снижения риска развития осложнений является точность выполнения манипуляции введения катетера в просвет трахеи и соблюдение ряда предосторожностей во время ее выполнения. Доказано, что использование транстрахеальной струйной вентиляции для эндоскопической лазерной хирургии гортани дает существенные преимущества. Опыт нашей клиники и зарубежных коллег показывает, что, несмотря на относительную простоту самой манипуляции, для предупреждения осложнений во время её осуществления и проведения струйной вентиляции следует строго соблюдать определенные правила. Применяя транстрахеальную струйную вентиляцию для эндоскопических микрохирургических вмешательств на гортани и верхних отделах трахеи, анестезиолог должен знать её преимущества и ограничения. Только умелое и строго по показаниям использование рассматриваемого метода струйной вентиляции легких позволяет в полной мере реализовать его возможности и уменьшить риск развития осложнений, обеспечивая, таким образом, достаточно высокий уровень безопасности больного при проведении анестезиологического обеспечения во время эндоларингеальных микрохирургических вмешательств.

Ключевые слова: транстрахеальная струйная вентиляция легких, эндоскопическая хирургия гортани

TRANSTRACHEAL JET VENTILATION FOR ENDOSURGERY OF THE LARYNX

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Summary. Transtracheal jet ventilation has been used for more than 40 years. Transtracheal jet ventilation is effectively used for endoscopic surgery of the upper respiratory tract, emergency care for acute respiratory failure before hospitalization, during maxillofacial operations, as well as for respiratory support during difficult intubation. Our experience of transtracheal jet ventilation during endoscopic microsurgery of the larynx accounts for more than 1,000 cases, so we can speak about the advantages and disadvantages of this method of respiratory support. In our opinion, it is necessary to accurately perform the catheter insertion into the lumen of the trachea and to comply with a number of precautions during this manipulation to reduce the risk of complications. It is proved that the use of jet ventilation for endoscopic laser surgery of the larynx has significant advantages. Despite of the relative simplicity of the manipulation, the experience of our clinic and some foreign colleagues has shown that it is necessary to follow the defined rules strictly during the execution of jet ventilation in order to prevent complications. The anesthesiologist who performs jet ventilation during endoscopic microsurgical procedures on the larynx and upper trachea should know the advantages and limitations of the method. Jet ventilation must be performed strictly according to indications, only specially trained anesthesiologist should perform this ventilation technique. These conditions allow to realize the potential of this method of lung jet ventilation and reduce the risk of developing complications. Thus, a sufficiently high level of patient safety during general anesthesia in endolaryngeal microsurgical procedures will be provided.

Keywords: *transtracheal jet ventilation, endolaryngeal microsurgery.*

ПЕРЕДНЯЯ АКТИВНАЯ РИНОМАНОМЕТРИЯ КАК МЕТОД ОЦЕНКИ ЭФФЕКТИВНОСТИ ЛЕЧЕНИЯ ПАЦИЕНТОВ РИНОЛОГИЧЕСКОГО ПРОФИЛЯ.

©Карпищенко С.А., Болознева Е.В., Мушникова Ю.В.

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Одними из самых распространенных заболеваний среди всех возрастных групп являются хронические заболевания полости носа, которые сопровождаются нарушениями его основных функций. В нашей статье представлена оценка эффективности восстановления носового дыхания после ряда ринологических операций, таких как эндоскопические операции на пазухах носа, септум – операция, нижняя подслизистая вазотомия, полипотомия. Целью нашего исследования было оценить эффективность оперативного лечения пациентов с хроническими заболеваниями полости носа и околоносовых пазух при помощи метода передней активной риноманометрии. Этот метод заключается в количественном измерении градиента давления и воздушного потока. По рекомендации Международного комитета по стандартизации объективного исследования носовых путей, в практике рекомендовано использовать именно этот метод, как более физиологичный. В нашем исследовании на кафедре оториноларингологии с клиникой ПСПбГМУ им. акад.И.П. Павлова обследовано 36 больных с заболеваниями, приводящими к носовой обструкции. Среди патологий искривление перегородки носа, полипозный риносинусит, вазомоторный ринит, кисты и инородные тела верхнечелюстных пазух, хронический полисинусит. Всем пациентам выполнялся полный оториноларингологический осмотр, эндоскопический осмотр полости носа, также передняя активная риноманометрия перед предполагаемым оперативным вмешательством, затем через 5 дней и через месяц после операции. По результатам проведенного нами обследования значительная прибавка носовой проходимости была получена после септум-операции и эндоскопической полисинусотомии. В остальных случаях увеличение воздушного потока через полость носа было менее значимым.

Ключевые слова: передняя активная риноманометрия, носовая проходимость, носовая обструкция, ринология.

ACTIVE ANTERIOR RHINOMANOMETRY, AS AN APPROACH FOR MEASURING THE EFFICIENCY OF TREATMENT OF PATIENTS WITH RHINOLOGICAL PATHOLOGY.

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Chronic diseases of the nose, which are accompanied by disruption of its basic functions, are widespread among all age-related groups. The results of nasal respiration reestablishment after a series of rhinosurgeries, such as endoscopic surgeries on paranasal sinuses, septoplasty, vasotomy, polypotomy, are presented in our study. The aim of the study was to estimate the efficiency of surgical treatment for patients with chronic diseases of the nasal cavity and paranasal sinuses by means of active anterior rhinomanometry method. This method is based on quantitative analysis of pressure gradient and air flow. This method is recommended as the most objective one according to the recommendations of International committee for the standardization of objective investigation of nasal tracts. In our research, which was conducted at the department and clinic of otorhinolaryngology, Pavlov First Saint Petersburg State Medical University (Russia), 36 patients with diseases, leading to nasal obstruction, were surveyed. Deviated nasal septum, chronic rhinosinusitis with or without polyps, vasomotor rhinitis were among the most common pathologies. All patients were subjected to complete otorhinolaryngological examination, rigid endoscopy of the nasal cavity and active anterior rhinomanometry prior to the surgery, and then again, 5 days and 1 month after the surgery. According to the study results, a significant increase in nasal patency was achieved after septoplasty and endoscopic sinus surgery. In other cases the increase was insignificant.

Keywords: active anterior rhinomanometry, nasal patency, nasal obstruction, rhinology.

CONSERVATIVE TREATMENT OF SNORING AND OBSTRUCTIVE SLEEP APNEA BASED ON CORRECTION OF NASAL OBSTRUCTION.

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The results of conservative treatment of snoring and obstructive sleep apnea syndrome with halotherapy and topical intranasal corticosteroids are presented in our study. Patients complaining of snoring and difficult nasal breathing were included in the study. Complete ENT examination, including rigid endoscopy (Storz), active anterior rhinomanometry ("Rinolan", Russia), cone beam CT ("Sirona") and respiratory monitoring were done in all patients before and after the treatment. CT was performed only before the treatment. Patients with acute sinusitis and/or significant deviation of the nasal septum were excluded. All patients were divided into 2 randomized groups. The first group received halotherapy, the second group was treated with nasal topical corticosteroids. We have analyzed the changes of nasal patency and AHI before and after the treatment. The study showed that nasal patency has improved and AHI has decreased after conservative treatment. Normal nasal breathing has a positive effect on the quality of patient's life, and a decrease in apnea/hypopnea index confirms the necessity and importance of continuing research of conservative treatment effectiveness.

Keywords: snoring, obstructive sleep apnea syndrome, halotherapy, nasal patency, topical nasal steroids.

RARE LATE COMPLICATION OF SILICONE ORBITAL IMPLANTATION

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РЕДКОЕ ПОЗДНЕЕ ОСЛОЖНЕНИЕ ИМПЛАНТАЦИИ СИЛИКОНА В ОРБИТУ

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Summary: The article reviews clinical and radiological features as well as early results of surgical treatment of rare late complication of nonporous silicone orbital implantation – encapsulation of the implant with pseudocyst formation. Pseudocyst with hemorrhagic liquid around nonporous implant was found in the patient who had reconstructive surgery after orbital floor fracture 12 years ago. Emergence of pseudocyst in orbit led to dyslocation of the eye globe with exophthalmos and oculomotor disorders. Computed tomography was performed for differential diagnosis. The patient underwent surgery. During orbitotomy a thick membrane was found around nonporous silicone implant. After partial excision of the membrane silicone implant was removed. As the defect of the orbital floor was completely replaced by

fibrous tissue covered by a thick pseudomembrane, extraction of the implant did not cause any functional or cosmetic defect. The operation and early postoperative period were uncomplicated. After 1 month position of the eye globe in the orbit and the eye mobility returned to normal.

Inability of nonporous implants to form new connections with surrounding tissues explains such complications as migration under the skin of the low lids, into the nasal cavity and sinus, the rejection, infection of the material. Formation of the pseudomembrane around an implant is a less common complication. The high frequency of late complications explains the refusal of many surgeons from silicone in favor of porous synthetic materials.

Keywords: orbit; orbital floor fracture; silicone; late complications; implant encapsulation.

КЛИНИКО-ДИАГНОСТИЧЕСКИЕ ХАРАКТЕРИСТИКИ ФАРИНГОМИКОЗА У ПАЦИЕНТОВ С КИСЛОТЗАВИСИМОЙ ПАТОЛОГИЕЙ ЖЕЛУДОЧНО-КИШЕЧНОГО ТРАКТА (ГЭРБ)

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Цель: повышение эффективности диагностики фарингомикоза у больных с ГЭРБ. **Задачи:** анализ клинических проявлений, исследование микробного пейзажа и уровня pH глотки в группах исследования, выявление взаимосвязи данных показателей. **Обследовано** 68 пациентов с фарингомикозом при ГЭРБ, 45 - с хроническим фарингитом при ГЭРБ, 19 - с фарингомикозом без ГЭРБ и 19 здоровых добровольцев. Основными жалобами, предъявляемыми всеми больными с ГЭРБ (n=113) со стороны глотки, были: першение (81,4%), сухость (79,6%), ощущение жжения (58,4%); 77% пациентов беспокоила охриплость. У всех пациентов с ГЭРБ наблюдается атрофия слизистой оболочки глотки. Средний уровень pH слизистой оболочки носоглотки, ротоглотки, гортаноглотки составил 6,55 ед., 5,8 ед., 6,15 ед. соответственно. С нарастанием ацидоза достоверно возрастает частота высеваемости грибов (p=0,0000036). Для фарингомикоза при ГЭРБ характерно наличие грибов рода кандиды в виде монофлоры у 86,8% пациентов (Candida albicans (96,6%) и Candida Glabrata (3,4%)), ассоциаций – у 13,2% больных (Candida albicans и Streptococcus β -haemolyticus (55,5%), Candida albicans и Staphylococcus aureus (22,2%), Candida Albicans и Candida Glabrata, и Candida tropicalis и Streptococcus β -haemolyticus (11,1%)). При фарингомикозе (без ГЭРБ) монофлора выявлена у 100% пациентов. У 48,6% пациентов с фарингомикозом при ГЭРБ pH ротоглотки 5-5,5 ед., с фарингомикозом без ГЭРБ - самый низкий pH 6 ед. По результатам фиброгастродуоденоскопии, в группах исследования преобладает незрозивная форма ГЭРБ. У пациентов с фарингомикозом при ГЭРБ сахаринное время составляет 22,1 мин, что превышает время пациентов с фарингомикозом без ГЭРБ (12 мин) и исследуемых контрольной группы (10,9 мин) в 2 раза.

Ключевые слова: гастроэзофагеальная рефлюксная болезнь; фарингомикоз; рефлюкс; омепразол.

CLINICAL AND DIAGNOSTIC CHARACTERISTICS OF PHARYNGEAL CANDIDIASIS IN PATIENTS WITH ACID-RELATED PATHOLOGY OF THE GASTROINTESTINAL TRACT (GERD)

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The aim of this research is to raise the effectiveness of pharyngeal candidiasis diagnosis in patients with gastroesophageal reflux disease (GERD). The goal of the study: to find correlation between clinical manifestations, microbial landscape and pharyngeal pH level in the study groups. 68 patients with

pharyngeal candidiasis and GERD were included in the study: 45 - with chronic pharyngitis and GERD, 19 - with pharyngeal candidiasis, but without GERD, 19 - healthy people. The main complaints of patients with GERD (n=113) were: irritation (81,4%), dryness (79,6%) and burning sensations (58,4%) in the throat; 77% of patients had hoarseness. All patients with GERD had atrophic mucosa of the posterior pharyngeal wall. The average pH level on the surface of the epi-, meso- and hypopharyngeal mucosa were 6,55, 5,8 and 6,15 units respectively. The frequency of mucor growing increased with the rise of acidosis ($p=0,0000036$). In pharyngeal candidiasis with GERD candida was a sole pathogen in 86,8% (*Candida albicans* (96,6%) and *Candida Glabrata* (3,4%)), in associations – in 13,2% of patients (*Candida albicans* and *Streptococcus β-haemolyticus* (55,5%), *Candida albicans* and *Staphylococcus aureus* (22,2%), *Candida Albicans* and *Candida Glabrata*, and *Candida tropicalis* and *Streptococcus β-haemolyticus* (11,1%)). In pharyngeal candidiasis without GERD the monoflora was revealed in all 100% of patients. 48,6% patients with pharyngeal candidiasis with GERD had pH in mesopharyngs about 5-5,5, all patients with pharyngeal candidiasis without GERD had pH not lower than 6 units. The results of esophagogastroduodenoscopy showed that not erosive form prevail. In patients with pharyngeal candidiasis with GERD saccharin test was 22,1 min, which exceeded the time in patients with pharyngeal candidiasis without GERB (12 min) and control group (10,9 min) twice.

Keywords: gastroesophageal reflux disease; pharyngeal candidiasis; reflux; omeprazol.

КЛИНИЧЕСКАЯ И КОМПЬЮТЕРНО- ТОМОГРАФИЧЕСКАЯ ХАРАКТЕРИСТИКА ОДОНТОГЕННЫХ РИНОСИНУСАЛЬНЫХ КИСТ ВЕРХНЕЙ ЧЕЛЮСТИ ВОСПАЛИТЕЛЬНОГО ГЕНЕЗА

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Анатомические особенности верхней челюсти, а именно близкое расположение корней зубов к стенкам верхнечелюстной пазухи или полости носа, а иногда и локализация корней премоляров и моляров в полости пазухи, обуславливает тесную взаимосвязь этих анатомических образований при наличии и распространении воспалительного процесса из периапикальной области зубов в полость носа или верхнечелюстного синуса. Радикулярные кисты верхней челюсти, увеличиваясь в размерах, постепенно распространяясь за пределы альвеолярного отростка, приводят к изменению (оттеснению, вздутию, деструкции) костных структур, образующих стенки носовой полости и полости верхнечелюстного синуса. Нередко при локализации корней моляров и премоляров в альвеолярных бухтах верхнечелюстной пазухи воспалительный процесс из периапикальной области быстро распространяется на слизистую пазухи, что приводит к развитию одонтогенного гайморита. Радикулярные кисты фронтальных отделов верхней челюсти склонны к распространению в полость носа, а также под слизистую оболочку ротовой полости с образованием патологических соустьев. Соустья могут образовываться также между ротовой полостью и полостью верхнечелюстной пазухи. Важным моментом является оценка целостности костных стенок полости носа или пазухи, состояние слизистой оболочки ЛОР-органов, наличие или отсутствие сообщения между полостью рта и носа через образовавшийся свищевой ход. Детальность определения вышеперечисленных признаков существенно влияет на выбор тактики лечения и прогноз выздоровления. Современные методы лучевой диагностики вместе с детальным стоматологическим и оториноларингологическим обследованием позволяют наиболее полноценно определить характер патологического процесса и степень его распространения.

Ключевые слова: синусит, ринит, периодонтит, одонтогенные кисты челюстей, конусно-лучевая компьютерная томография (КЛКТ, 3ДКТ); мультиспиральная рентгеновская компьютерная томография (МСКТ).

CLINICAL AND COMPUTED TOMOGRAPHY CHARACTERISTICS OF INFLAMMATORY ODONTOGENIC RHINOSINUSAL CYSTS OF THE UPPER JAW

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Anatomical features of the upper jaw, namely, the close location of the roots of the teeth to the walls of the maxillary sinus or the nasal cavity, and sometimes localization of the roots of premolars and molars in the cavity of the sinus, causes the close relationship of these anatomical structures in the presence and distribution of inflammation of the periapical region of teeth in the nasal cavity or maxillary sinus. Radicular cyst of the upper jaw, increasing in size, gradually extending beyond the alveolar process, lead to a change (deformation, swelling, destruction) of bone structures forming the walls of the nasal cavity and the maxillary sinus cavity. Often with the localization of the roots of molars and premolars in alveolar bays of the maxillary sinus inflammation of the periapical region is rapidly spreading to the sinus mucosa, which leads to the development of odontogenic sinusitis. Radicular cysts of the frontal parts of the upper jaw tend to spread to the nasal cavity, as well as under the mucosa of the oral cavity with the formation of pathological anastomoses. Fistula can form between oral cavity and maxillary sinus. The important point is to assess the integrity of bony walls of the nasal cavity or sinuses, the mucous membranes of ENT organs, the presence or absence of communication between the mouth and nose through the formed fistula. Detailed definitions of these indicators significantly influences the choice of tactics of treatment and prognosis. Modern diagnostic methods along with a detailed dental and otorhinolaryngologic examinations allow the most comprehensive to determine the nature of the pathological process and the degree of its dissemination.

Keywords: sinusitis, rhinitis, periodontitis, odontogenic cysts of the jaws, cone beam computed tomography (CBCT, 3DCT); multislice computed tomography (MSCT).

Приложение к номеру



**Материалы XXIX Международной конференции
Молодых Отоларингологов им. профессора М.С.Плужникова**

MODERN METHOD OF TREATING CATARRHAL OTITIS MEDIA

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The work was aimed at increasing the effectiveness of treatment resistant Eustachian tube dysfunction, which leads to relapse of catarrhal otitis media with effusion. The authors have developed difragmalno-slit valve integrated with Silicone tympanal shunt.

It was experimentally defined that the compression threshold is equal to 123,06 daPa, where the phrenic-slit valve balances the extra- and intratympanal pressure.

A comparative analysis has shown that the effectiveness of the long-term dysfunction treatment of the auditory tube with a functional tympanic shunt increased by 13.3%, while the ventilation function of the auditory tube of 51 patients/ear has been completely restored which is 98.1%.

The term of the treatment of patients with the use of functional shunt is $42,11 \pm 8,46$ days (catarrh of the middle ear) and $59,03 \pm 7,17$ days (with exudative otitis media), which, respectively, 42.9% and 37.3% less than conventional treatment ($p < 0.05$).

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CLINICAL SIGNS OF CYSTS OF THE LARYNX

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Cysts of the larynx, a rare pathology, manifested mainly by problems with breathing, changes in voice and dysphagia. Often the symptoms are masked. The basic symptoms of clinical pathology are considered.

Key words: *laryngeal cyst, congenital abnormalities of the larynx.*

Objectives

Laryngeal cyst - a benign congenital or acquired soft tissue neoplasm of the larynx, represented by a cavity with fluid, covered with stratified squamous epithelium. Normally found in the vestibular and infraglottic part of the larynx, little less in the voice part. Clinical signs can appear respiratory distress, stridor, dysphonia, and, rarely, dysphagia.

The frequency of pathology is 1,82-3,49 per 100,000 newborns according to various authors. Because of its rarity, this problem remains unexplored and may lead to life-threatening respiratory problems, requiring emergency surgery.

Our purpose is to study main clinical signs of cysts of larynx.

Materials and methods

Retrospective analysis of 16 patients with laryngeal cyst, the main symptoms of the disease is identified.

Results and discussion

A retrospective analysis of 16 patients with a diagnosis of laryngeal cyst showed that complaints that patients vary widely depending on the larynx. Among the complaints appeared noisy breathing, difficulty breathing, shortness of breath on exertion, dysphagia, regurgitation, hoarseness. Symptoms of respiratory distress, stridor occurred in 12 patients (80%), voice changes (dysphonia, aphonia) 3 (20%), dysphagia in 1 patient (6.6%) are asymptomatic in 1 (6.6%). When the cyst is located in the supraglottic part, mainly symptoms are breathing difficulties, there are complaints of dysphagia and regurgitation. Cysts that located in the glottis area lead to voice changes, without signs of respiratory distress. Pathology, that located in supraglottic part of the larynx appears increasingly impaired breathing, shortness of breath and can be mixed, expiratory-inspiratory character that is often difficult to diagnose.

Conclusions

Patients without evidence of acute inflammatory diseases of the upper and lower respiratory tract should be consulted by ENT doctor to spot congenital or acquired laryngeal cysts. After identifying the pathology for all patients recommended surgical treatment, even in asymptomatic disease.

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CONE BEAM COMPUTED TOMOGRAPHY IN THE TEMPORAL BONE PATHOLOGY DIAGNOSIS

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More than 400 cone-beam CT (CBCT) of the temporal bone was performed from 2012 to 2016 at the Pavlov First Saint Petersburg State Medical University otorhinolaryngology department. An optimal patient positioning for imaging of the temporal bone were designed. Algorithms for the preoperative evaluation of surgically significant features of the outer and middle ear structure before surgery, including the medial wall surgery, were improved.

Key words: *temporal bone, cone-beam computed tomography, otology, otosclerosis.*

Objective

The aim of this study was to improve CBCT of temporal bone analysis algorithm by ENT specialist for selecting optimal treatment strategy in patients with pathology of outer and middle ear.

Materials and methods

More than 400 cone-beam CT (CBCT) of the temporal bone was performed from 2012 to 2016 at the Pavlov First Saint Petersburg State Medical University otorhinolaryngology department using Galileos Comfort cone-beam tomograph (Sirona Dental Systems GmbH, Bensheim Germany), software Galaxis, tomographic shooting options: 85 kV, 4mA, 28mA/s, 0.15 mm isotropic voxel size, the effective dose 70mkZv.

The study involved the following steps:

- development of optimal patient positioning for the tomography;
- experimental phase (scanning of the temporal bone specimens, the skull for assessing the conducted measurements accuracy);
- retrospective analysis and comparison of the temporal bones CTs, depending on the type of temporal bone structure (pneumatic, mixed, sclerous) to compile analysis algorithm of temporal bones CBCT;
- comparing CBCTs with operational data, on this basis the additional parameters for evaluation were introduced in the analysis algorithm before surgical treatment of middle ear inflammatory pathology and, separately, when planning surgery on the lateral wall of the tympanic cavity.

Results and discussion

The positioning introduced in clinical practice includes the patient's head exposition on orbitomeatal line. Using this positioning incus-hammer joint, short arm of the incus, aditus ad antrum are well visualized in the axial plane.

An algorithm for the analysis of the temporal bone CBCT is proposed, which contains the following steps:

Qualitative analysis of tomograms conducted for each study of the temporal bone the state of the external auditory canal in the bony and cartilaginous parts, the wholeness of the walls, the presence / absence of contraction at the expense of soft tissue / bone component, presence / absence of fenestration with the cavity of the temporomandibular joint, the soft tissue of the parotid region;

- pneumatization type of the mastoid process;
- pneumatization of antrum and the tympanic cavity;
- presence / absence of the bone-destructive changes in the temporal bone;
- the state of the auditory ossicles and their interposition;

- height of jugular vein bulb;
- the wholeness of the bony labyrinth wall;
- the symmetry of internal auditory canals;

Additional quantitative parameters used in the planning of middle ear surgery

- the depth of the antrum;
- height, depth and length of the antrum;
- the depth of the sigmoid sinus;
- distance from the antrum to the sulcus of sigmoid sinus;
- the thickness of the wall of the bone between the horizontal semicircular canals and aditus ad antrum;
- the thickness of the wall between the bone canal of the facial nerve and aditus ad antrum;
- the thickness of the wall between the bone canal of the facial nerve and horizontal semicircular canals;
- comparing the depth of the antrum and sigmoid sinus we concluded the presence / absence of sinus lateroposition;

Additional parameters used in the planning of labyrinth wall surgery, for example, before stapedoplasty

- the presence or absence of the facial nerve canal overhanging;
- width and depth of the vestibule window niche
- presence or absence of the cochlea window niche ossification

Statistical processing of the data revealed significant differences between clinically significant anthropometric parameters depending on the type of pneumatization and the presence of inflammatory changes in the temporal bone.

When comparing the CBCT data with intraoperational data in stapedoplasty the diagnostic sensitivity was 100%, the diagnostic specificity was 82%.

Conclusions

Cone-beam tomography has established itself as a reliable method for diagnosing of the outer and middle ear diseases and can be used before planning surgery, as well as the radiological control in the postoperative period and assessing the dynamics of the outer and middle ear disease.

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ANATOMICAL VARIATIONS OF THE HASNER'S VALVE

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Endoscopic endonasal interventions are widely used nowadays. The development of Functional Endoscopic Sinus Surgery significantly improved ways of treatment of paranasal sinus abnormalities. The area of FESS interests is not limited by rhinologic reasons only.

Many ophthalmologic problems can be solved by means of surgical intervention through the nasal cavity due to the adjacent anatomical position of eyeballs, optic nerve, lacrimal ducts. Ophthalmologic indications for endoscopic rhinosurgery include: lacrimal obstruction, orbital compression in endocrine orbitopathy, optic nerve injury, etc.

Nasolacrimal duct opens into the inferior nasal meatus called Hasner's valve. Nasolacrimal duct orifice is located under the inferior turbinate appearing as a mucous membrane fold. In 1884 P. Tillaux determined the distance between Hasner's valve and the anterior nostril, which made up 3-3,5 cm. According to Maliborski A., Różycki R., E. Tatlisumak, nasolacrimal duct and maxillary sinus ostium are closely located to each other, within the distance of about 4 mm. Surgical interventions in the region of natural maxillary sinus ostium can result in nasolacrimal duct injuries.

In ENT department of the I.P. Pavlov 1st St. Petersburg State Medical University during more than 7 years we prefer inferior meatus temporary approach without artificial window formation for maxillary sinus endoscopic surgery.

Purpose: to determine the anatomical characteristics of the orifice of the nasolacrimal duct (Hasner's valve) in the inferior nasal meatus.

Methods and materials: during the year 2014 100 patients were examined at the department of otorhinolaryngology of I.P. Pavlov 1st St. Petersburg State Medical University, and the location of the nasolacrimal duct orifice was intraoperatively identified in the inferior nasal meatus. The proportion of men and women accounted for 41 (41%) and 59 (59%). Mean age was 39 years old.

Maxillary sinus antrostomy was performed in all patients. Unilateral antrostomy was carried out in 68 cases (68%), bilateral – in 42(42%) cases. The following characteristics of maxillary sinus pathologies were revealed: cystoid sinus formations, chronic polypous polysinusitis (rhinosinusitis), maxillary sinus foreign bodies, chronic maxillary sinusitis.

Surgical intervention was performed under general or local anaesthesia. Local anaesthesia was used in isolated maxillary sinus damage. In these cases 10% lidocaine solution was applied over the nasal mucosa with the following infiltration of ultracaine solution into the agger nasi, inferior turbinate, nasal floor and lateral wall under the inferior turbinate. After the inferior turbinate medialization and before the antrostomy Hasner's valve identification was carried out by means of rigid endoscopes 0⁰ and 30⁰.

The location of nasolacrimal duct orifice was determined either by pressing the internal canthus at the site of lacrimal sac projection or by patient's winking frequently. These produced passive oscillation motions of nasolacrimal duct distal parts and/or lacrimation.

The next step included antrostomy with raspatory through the lateral wall of the nasal cavity from the site of inferior turbinate attachment to the nasal floor within 1-1,5 cm, the produced flap drawn back and medially. The pathologic mass was then removed from the maxillary sinus through the formed opening under the endoscopic control.

Results: identification of nasolacrimal duct orifice was achieved in 82 (82%) cases. In 18 cases Hasner's valve didn't have clear anatomical margins. 12 patients with the established lacrimal duct patency were unable to produce lacrimal fluid despite Hasner's valve anatomical identification.

The lateral wall of inferior nasal meatus was nominally divided into several parts: roof of the inferior nasal meatus (the site of inferior turbinate attachment) and upper, middle and lower thirds. In bilateral antrostomies Hasner's valve location was different in most cases.

Nasolacrimal duct orifices of various shapes were identified: slit-shaped, oval, circular, triangular.

Conclusions: The shape of nasolacrimal duct orifice is variable. The outlet orifice can present as a closing valve or occasionally - a gap. In most cases Hasner's valve is located in the upper parts of inferior nasal meatus. In endoscopic endonasal inferior meatus antrostomy Hasner's valve identification before artificial window formation allows minimal risk of nasolacrimal duct damage.

PREOPERATIVE EMOTIONAL/BEHAVIORAL FUNCTIONING OF A CHILD IS ASSOCIATED WITH HIGHER POSTOPERATIVE PAIN AT HOME AFTER ADENOTONSILLECTOMY

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Introduction and aims: Postoperative pain following adenotonsillectomy is a major concern in pediatric anesthesia [1]. Currently little is known about specific child factors predicting postoperative pain at home. Aims: 1. to assess the prevalence of postoperative pain at home; 2. to test the influence of emotional/behavioral functioning on postoperative pain corrected for child and parental state anxiety as well as emergence delirium (ED).

Methods: A prospective cohort study was carried out. Inclusion: eligible were all consecutive children between 1.5 and 5 years old, ASA 1&2, good Dutch comprehension of the accompanying parent, undergoing adenotonsillectomy in a day-care setting. Exclusion: children with mental retardation.

Instruments.

- *Postoperative pain* was assessed using the Parental Postoperative Pain Measure (PPPM). The dependent variable used in the regression analysis was the sum of the PPPM scores of the first 3 days and day 10 postoperatively (the PPPM_{sumscores}).

- *Emotional/behavioral functioning* of the child during the past 6 months was rated by the accompanying parent using the Child Behavior Checklist (CBCL), culminating in a total problem score (CBCL_{totalproblemscore}).

- Using the Modified Yale Preoperative Anxiety Scale (mYPAS) *child state anxiety* was scored at 3 different moments: in the holding area, 2. at entrance of the operating theatre and at induction with mask. We used the sum of these scores (mYPAS_{sumscores}) in the analyses.

- *Parental anxiety* was measured by Spielberger's State-Trait Inventory (STAI).

- The Pediatric Anesthesia Emergence Delirium scale (PAED) was used to *assess ED* during the first 20 postoperative minutes.

Procedure: informed consent was obtained. All children received standardized anesthesia (inhalation with sevoflurane) and pain management (including Non-Steroidal Anti-Inflammatory Drugs [NSAIDs] and paracetamol).

Results: A total of 73 children (52% boys) entered this study. During the first 3 days at home, 47% of the children had scores ≥ 6 on PPPM_{1-3days} and at day 10 still 5.3%. Hierarchical regression analysis revealed that the child's emotional/behavioral functioning, expressed by the CBCL_{totalproblemscore}, significantly predicted postoperative pain (regression coefficient of 0.18; 95% confidence interval 0.04 to 0.32; $P = 0.014$), independent of the effects of the child's state anxiety, parental state anxiety and ED.

Discussion and conclusion: Children experience significant pain after tonsillectomy. Preexisting emotional/behavioral problems are associated with more pain at home and could be helpful to identify more vulnerable children.

FUNCTIONAL STATE OF THE EUSTACHIAN TUBE IN PATIENTS WITH DISEASES OF THE NOSE AND SINUSES

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Introduction. In modern literature little information about the condition of the middle ear in various pathologies of the upper respiratory tract. Study objective analysis of the impact of acute rhinosinusitis on the ventilation function of the middle ear and on the development of exudative otitis media

Subjects and methods. Were examined in two groups of patients (N): 50 children (N=50) aged 7-18 years, and 10 (N=10) adults with acute purulent rhinosinusitis who have made impedansometry. Analyzed 70 tympanogram (n).

Results. In children, 82% of patients (N = 41/50) with purulent process in the paranasal sinuses had tympanogram type "B" and "C". After treatment, only 7 children survived dysfunction of the auditory tube, tympanogram type "C1" preserved in 4 patients (Test χ^2 $p < 0.0001$). Compared with children, adults rarely had dysfunction of the auditory tube (N=1/10; n=2/20 or 0.1%). It was recorded tympanogram type "C1".

Conclusion. Acute rhinosinusitis in children in contrast to adults is a factor of risk of dysfunction of the auditory tube. Timely treatment of sinusitis prevention of the development of exudative otitis media

MAXILLARY SINUS OSTEOMA

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Osteoma is the leading benign tumor of paranasal sinuses. Most often it is located in frontal and ethmoid sinuses, less frequently – in maxillary and sphenoid sinuses. It is more common in male, than in female, the ratio is 2-1,6:1. Etiology of the bone neoplasm is unknown. There are many different theories and there is no consensus on a cause of appearance of osteoma. Clinical symptom of osteoma depends on its dimensions, progression, growth and its location in relation to surrounding structures. As a rule, CT examination of paranasal sinuses is recommended to patients with rhinologic disease. This method of diagnostics is the most reliable for osteoma identification. After diagnosis is verified it is necessary to make a decision if surgical treatment is needed or dynamic observation is possible. Main methods of surgical treatment of maxillary osteoma are: Caldwell-Luc surgery, combined endoscopic method, endoscopic endonasal approach.

Objective: is to assess a possibility of complete removal of maxillary osteomas using endoscopic endonasal method.

Materials and methods: 4 patients with maxillary sinus osteomas were operated at ENT Clinic of the Pavlov First Saint Petersburg State Medical University from December 2014 till January 2016.

All the patients have undergone complete ENT examination, endoscopic examination of nasal cavity and nasopharynx, 3D CT examination of paranasal sinuses. In all the patients the osteoma was removed with endoscopic, endonasal approach, through the inferior nasal meatus by means of Blakesley forceps.

Results: osteoma of maxillary sinus was completely removed from the maxillary cavity in all the patients. Control 3D computer tomography images in 7 days after the surgery showed parietal edema of sinus mucosa at the place of attachment of the lesion. The pain in a projection of maxillary sinus was stopped. Postoperative period was not complicated.

Conclusion: the maxillary sinus osteoma in most cases was accompanied by various sinusites with mostly recurrent course. Removal of the neoplasm using endoscopic endonasal approach was a surgical intervention performed with only local anesthesia. Such method of treatment results in considerable decrease in duration of postoperative period (in comparison with radical maxillary surgery) and it helps to avoid cosmetic defects. It stands to mention that the pain syndrome in the postoperative period after endoscopic surgery was minimal.

FOREIGN BODIES OF THE AURICLES (PIERCING): THE CURENT STATE OF THE PROBLEM

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Keywords: *piercing, complications, experimental animals*

Foreign bodies of the ENT organs are rather common pathology. Piercing is a specific variety of such states. In modern society, piercing is used with an aesthetic purpose and can be performed actually on all ENT organs. But the auricle is the most frequent place of piercing. Foreign bodies for piercing have various shapes and are made of different materials.

In this connection, the purpose of the present work consisted in the study of the occurrence of piercing in the auricles of man and responses of the organism to penetration of foreign bodies.

Materials and methods. We have questioned 823 students and patients on the basis of the ENT hospital of Kharkiv National Medical University. Such aspects were revealed as the presence of piercing, which body parts underwent implanting, kinds of pieces and material, presence of complications as well as motivation for piercing.

In order to find out the causes of complications after piercing, pathomorphological and microbiological changes in the organism of experimental animals were studied. For this purpose we used 24 4-month-old Chinchilla rabbits of both sexes. Implants (ear-rings) were fixed into the region of their auricles. All experimental animals were divided into 4 groups depending upon the kind of the piece material (14-carat gold, surgical steel, sterling silver, titanium). All the implants had their quality certificate. Biopsy materials from the wound track were pathomorphologically examined on days 7, 14, 28 and 60. The microflora of the wound track was identified within the same terms.

Results. Our analysis of the clinical material showed that people at the age of 20-40 years comprised the most numerous group. Piercing of the auricles was found in 503 people, and 315 did not have any piercing. Here the number of women was 95,4%, thereby exceeding the number of men – 4,5%. It was also revealed that of 503 piercing carriers gold pieces were used by 56,8% people, silver ones by 18,5%, titanium ones by 4,3% and surgical steel ones by 20,3% . Surgical intervention caused complications in 12,6% cases in the form of long-term suppuration of the perforated channel. The postoperative period (up to 1-2 years) revealed appearance of atheromata, keloid scars on the ear lobes, perichondritis of the auricle and contact dermatitis. The majority of cases of experimental animals had vegetation of pathogenic microflora in the wound tract region.

Our study of the biopsy material from the auricles found out formation of connective tissue structures around the wound tract, this phenomenon being the most marked in the group of animals with surgical steel implants.

Conclusions. Foreign bodies of the auricles (piercing) are an everyday occurrence. It should be noted that the performance of the auricle piercing and long-term carrying of implants inside tissues are a dangerous procedure, which causes different kinds of complications.

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CLINICAL RESEARCH OF THE QUALITY OF LIFE IN PATIENTS WITH DISEASES OF OPERATED NOSE.

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Keywords: quality of life, questionnaire SF-36, diseases of operated nose.

A widespread introduction of microendoscopic intranasal surgery is accompanied by a number of patients in whom the operation did not lead to the eradication of the disease and even significantly worsened their condition. Quite often such patients can't perform their professional duties; they develop depression, which has a significant impact on their quality of life. Condition developed after surgical intervention, in which changes in anatomical and physiological relations of intranasal structures causes the exacerbation of the main disease, or a new pathological process appears should be interpreted as a disease of operated nose (DON).

Purpose: to evaluate the quality of life (QOL) in patients with the diseases of operated nose (DON).

Methods. The present study was conducted for evaluation of QOL of 76 patients with DON and 87 patients before the primary surgical treatment who appealed to the Central Clinical Hospital of the Presidential Administration of the Russian Federation in 2013-2015. Patients underwent interviewing for evaluating QOL. A Russian version of the SF-36 questionnaire was used. Statistical processing was performed using IBM SPSS Statistics 22.0 software. Data presented as the arithmetic mean and standard deviation. Differences were considered as statistically significant at $p < 0.05$.

Results. Analysis of the QOL in patients of the main group revealed that the PF (physical activity) was 83.56 ± 7.7 ; RP (role of physical problems in the limitation of vital functions) 89.37 ± 26 ; BP (physical pain) 80.1 ± 13 ; GH (general health perception) 57.93 ± 13.1 ; VT (viability) 70.11 ± 10.9 ; SF (social activity) 89.08 ± 13.6 ; RE (role of emotional problems in the limitation of vital functions) 91.95 ± 23.8 ; MH (mental health) 74.34 ± 12.1 ($p < 0.05$). In the control group, quality of life indicators were: PF 58.36 ± 17.7 ; RP 42.11 ± 39.6 ; BP 61.55 ± 28.2 ; GH 27.67 ± 20.5 ; VT 38.36 ± 20.4 ; SF 51.55 ± 25.6 ; RE 32.44 ± 35.3 ; MN 45.09 ± 21.5 ($p < 0.05$).

Discussion. According to the results, patients with DON three times decreased the RE index, showing the breaking of control over emotional state. RP and PF indicators decreased twice, pointing to a sharp increase of the role of physical problems in the limitation of vital functions.

Significant reduction of social contacts (SF), reduction of communication due to the worsening of the physical and emotional state related to the patients with DON. MH index decreased by almost 1.5 times, indicating the tendency of patients to neuroticism, depression. On this background reduction in the overall perception of health indicators (GH), vitality, mood and vitality (VT) was marked.

Conclusions: The study revealed that problems of nasal breathing, constant feeling of illness, instability to stressful situations forced patients to limit their physical and mental activity, give up sport and communication, thereby leading to depressive states.

OUR EXPERIENCE IN INTRATYMPANIC STEROID INJECTIONS FOR SENSORINEURAL HEARING LOSS TREATMENT.

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Resume. The article is dedicated to intratympanic steroid injections for sensorineural hearing loss treatment. A method of introduction of highly concentrated solution of 6-methylprednisolone into the tympanic cavity is described. Our experience in treatment of 9 patients is described. The results are reported. The prognostic value of acoustic recruitment is discussed.

Key words: *intratympanic injections, steroid injections, sensorineural hearing loss, sudden hearing loss.*

Abstract

The sudden sensorineural hearing loss (SNHL) is a big problem of modern society. This multi-ethiological disease without fast treatment can leave patient with socially unacceptable hearing level. Treatment with systemic steroids can help to control hearing loss in most patients, but, if failed, there is a need in a salvage treatment option. Intratympanic steroid injections (ITSI) is useful in treatment of sudden SNHL when conventional treatment was not effective.

Aim of the study

The aim of the study was to evaluate the effectiveness and safety of ITSI in treatment of patients with SNHL, who failed systemic steroid treatment.

Patients and methods

In the ENT department of The First I.P.Pavlov State Medical University of Saint-Petersburg 9 patients were treated with ITSI. 6 of them had sudden SNHL, 2 patients with impairment of chronic SNHL, and 1 with tinnitus after acoustic trauma. All patients were clinically examined. The pure tone audiometry (PTA) was performed before each phase of treatment. Threshold of auditory discomfort registration and Lusher test were used to reveal acoustic recruitment phenomenon. All patients with SNHL underwent systemic steroid treatment within 7 days, and had no improvement after it. For injection we used 0,41 – 0,7 mm spinal needle. The procedure was performed under microscopic control. The site of the injection was applicated with 20% phenol solution. The contraperture puncture was done in antero-inferior quadrant of tympanic membrane. Near to it the main puncture with injection of 0,5 ml of 6-methylprednisolone 125 mg/ml solution was done. Patients were left with head rotated in 45 degrees contralaterally for 45 minutes. Patients were instructed not to speak, blow nose, do Valsalva maneuver or swallow. The course of injections consisted of 5 procedures, 1 time per 3 days.

Results and discussion

3 patients with sudden SNHL had significant improvement in PTA results after course of treatment. 2 patients had uncertain improvement, PTA thresholds after treatment were less than 20 dB better than before treatment. One of those patients she went out from course after second injection. 1 patient did not improved. Among 2 patients with chronic SNHL, 1 patient had significant improvement of hearing after course of injections. But after 2 month hearing was bad again. Overall we have 37,5% of improvement in patient with SNHL. One patient with tinnitus after acoustic trauma went out after first injection, because of conductive hearing

impairment after tympanic membrane puncture. He recovered from tinnitus after 1 month with conservative treatment. 4 of 9 patient complained of pain in the ear for 45 minutes after injection. No other adverse effects or complications were noticed. All patients, who did not improved after ITST course has no acoustic recruitment. 2 of 3 patients with acute SNHL, who had significant improvement, and 1 of 2, who had doubtful results had positive acoustic recruitment. We consider, that steroid drug goes into the perilymph through the cochlear window and realize its effect in the cochlea only. Therefore, it is suggested that acoustic recruitment can have prognostic value for ITST treatment. Our results are inspiring. But more observations needed to obtain evidence.

Conclusions

Intratympanic steroid injections must be used in cases of systemic steroid treatment failure in sudden sensorineural hearing loss patients. It also can be proposed to patients with chronic sensorineural hearing loss and tinnitus. Acoustic recruitment must be evaluated as a prognostic factor of ITST treatment effect.

COMPARISON OF THE OUTCOMES OF MODERATE AND WIDE LASER RESECTIONS IN THE TREATMENT OF PARALYTIC LARYNGEAL STENOSIS

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Keywords: *paralytic laryngeal stenosis, laser resections, tracheostomy.*

Background

Currently, for the treatment of paralytic laryngeal stenosis (PLS), endoscopic laser resections are used. The volume of the resection for PLS varies from moderate (MR), (posterior chordectomy) to wide (WR), involving the vestibular folds, or with excision of scar, or with additional transverse cordotomy.

Objective

The aim of this study was to compare the outcomes of moderate and wide laser resections in the treatment of paralytic laryngeal stenosis, and try to find criteria, that allow performing objective choice about the volume of the resection.

Methods

The study involved 51 patients (47 females and 4 males) who suffered from paralytic laryngeal stenosis, and were treated in the ENT department of First Pavlov State Medical University of St. Petersburg from 2012 to 2015. The quality of life (SF-36), voice analysis (Praat) and respiratory function were assessed before and after operation. Also, we evaluated the following criteria: the angle of the vocal folds, value of BMI, severe concomitant diseases and others. All of the criteria and their severity were expressed in point scale. Patients were divided into 2 groups. The first group consisted of 19 patients who had moderate laser resection, 5 (26,3%) of theme had a tracheostomy. The second group included 32 patients with wide resections, 25 (78,1%) of them had a tracheostomy.

Results

All patients in the moderate resection group showed good results. All patients in this group with a tracheostomy were able to be decanulated. In the group of wide resection, a

successful outcome was achieved in 30 (93,8%) patients. 23 (92%) patients with a tracheostomy were able to be decanulated. The resulting voice quality outcomes in the WR group were worse than in the MR group. However, the indicators of respiratory function were similar in both groups. In addition, the Physical Health (PH) in the MR group ($45,4 \pm 4,6$) was slightly lower than in the WR group ($47,9 \pm 5,4$), and indicators of Mental Health (MH) did not differ, and were normal. Then we compared the type of resection and the results of the scale criteria. Statistical analysis showed that, if the total score was 6 or more, then the wide resection (WR) was performed. If the total score was 3 or less, then the moderate laser resection (MR) was performed significantly more often than WR.

Conclusion

The choice of surgical treatment methods for patients with paralytic laryngeal stenosis should be made on an individual basis for each patient, taking into account various factors. Choosing the right volume of resection, it is possible to achieve good results in respiratory function, and quality of life, with maintaining acceptable voice.

EVALUATION OF BRONCHIAL REACTIVITY FOR PREVENTION OF BRONCHOPULMONARY COMPLICATIONS IN RHINOSURGICAL PATIENTS.

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Keywords: *rhinosurgery, bronchospasm, bronchial hyperreactivity*

The actual question of diagnosis of a latent bronchospasm in the rhinosurgical patients. Conducted research indicated a higher level of bronchial hyperreactivity in the rhinosurgical patients. Offered diagnostic methods of the determination bronchial hyperreactivity to prevent the development of intra and early postoperative complications in rhinosurgery.

Introduction. The role of bronchial hyperreactivity in the formation bronchial complications resulting after rhinosurgical is known for a long time. The existence of hidden bronchospasm argue to the indicates developing chronic pulmonary disease. Upper respiratory tract associated with the entire respiratory system via sensory motor innervation of the nasal mucosa and conductive paths. The existence of the reflex interrelation between nasal cavity and lower divisions of the respiratory tract are supported by clinical observation and experimental research.

Aim of the study. To learn estimation method of assessment the bronchial reactivity for investigation the degree of risk bronchopulmonary diseases in rhinosurgery.

Material and methods. A retrospective analysis of the literature and clinical data. The results of the research. The results of investigation showed that rhinosurgical interventions are powerful stimulus, therefore we can assume the existence of the risk of bronchopulmonary complications at patients, both during surgical operation and in the postoperative period.

Conclusion. It should be mandatory preoperative control of bronchial reactivity in all patients with pathology of the nasal cavity.

THE IMPACT OF SMOKING ON THE NASAL BREATHING CYCLIC CHANGES

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Keywords: nasal cycle; rhinoflowmetry.

Introduction. Substances released during cigarettes smoldering inevitably impact harmfully on the functional and morphological organization of the upper respiratory tract's structures.

The aim of our investigation was to study the smoking effects on the nasal cycle.

Clinical supervisions and methods. The basis of the investigation were data of long term nasal breathing monitoring within 24 hours during daytime wakefulness and night sleep with rhinoflowmeter «Rhinocycle» in 8 males aged 18-63 (the average age was 34.1 ± 3.6) and 4 females aged 23-59 (the average age was 38.5 ± 5.5). 5 males and 2 females were systematically active smokers and 3 males and 2 females were passive smokers. The average number of cigarettes during 24 hours was 14.6 in males and 11.5 in females. The study results were presented as fluctuation graphs of the relative volumetric flow of the air passing through the nasal cavity for a certain period in the relative units. The dependences developed were evaluated according to the L.L. Derjavina's classification (2002) which specified classical (regular) nasal cycle and non-classical (irregular) one. The latter type includes overlapping partial fluctuating nasal cycle, fluctuating unilateral and bilateral one.

Results and discussion. The decrease in the value of relative volumetric air flow was noted after smoking on the leading side of the nasal cavity; its differences averaged 14.6 ± 0.9 relative units in males and 19.4 ± 1.4 relative units in females. It lasted about 40-60 minutes. Then the indicator began to rise to its original settings. However there was a sharp reduction in one fluctuation's duration and its differences averaged 42.9 ± 3.3 minutes in males and 55.1 ± 2.6 minutes in females. In addition all surveyed adults had from 3 to 7 episodes of the absence of relative volumetric air flow fluctuations within 40 minutes from the time of smoking (acyclic graph's parts of the changes of relative volumetric air flow).

Conclusions. There were similar fluctuations patterns of the relative volumetric nasal air flow recorded in the adults majority exposed to active and passive smoking. The inhalation of tobacco smoke reduced significantly the relative volumetric air flow in the leading nasal cavity side. In addition it made shorter the current fluctuation duration and led to the emergence of acyclic intervals on the recorded oscillations' graph of the nasal cycle.

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THE OPTIONS FOR THE STRUCTURE OF THE COMPLEX STRUCTURES OSTIOMEATAL, RESULTING IN STENOSIS OF THE NATURAL MAXILLARY SINUS FISTULA AS RISK FACTORS FOR MAXILLARY SINUSITIS

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Keywords: *ostiomeatal complex, maxillary sinusitis, 3 D X-ray computed tomography of the paranasal sinuses*

The urgency of the problem of maxillary sinusitis due to the high incidence of this disease. Rhinosinusitis one of the most common diagnoses in ambulatory practice. In the USA, about 15% of the adult population suffers from various forms of rhinosinusitis. According to statistics, in Russia the disease carry nearly 10 million people a year, and in the ENT hospital structure of this pathology is from 15 to 36%.

Objective: to estimate the structural features of the structures ostiomeatal complex (OMC) in patients with maxillary sinusitis according to 3 D X-ray computed tomography of the paranasal sinuses (3 D RKT SNPs).

Materials and methods: We analyzed the 3 D RKT SNPs in 50 patients with maxillary sinusitis. Women were 33 (66%), 17 men (34%). The age of patients ranged from 19 to 70 years. Disease duration ranged from 7 days to 15 years or more. 3 D CT SNPs was carried out on the basis of the Clinic of Otorhinolaryngology (Corl) of the Kazan State Medical Academy on the dental computer tomograph 3 D My Ray Skyview Cefla Italy. The survey was carried out before the patient relief of acute inflammatory process and provide training aimed at reducing edema and hyperemia of the mucous membrane of the nasal cavity and the paranasal sinuses. Evaluated the frequency of involvement of the maxillary sinuses in the pathological process, the state of the nasal septum and the anatomical structures of the lateral wall of the nose in the OMC, the middle turbinate, hooklike process, trellis bladder fistulae SNPs, lattice funnel, as well as the presence of certain groups or individual cells ethmoid sinus located in the OMC.

Results and discussion: In all patients with rentgenotomographic study revealed pathological changes in the nasal cavity and the paranasal sinuses. In 30 (60%) 3 D CT SNPs have been various kinds contortions nasal septum in combination with hypertrophy of the lower and middle turbinates. All patients with maxillary sinusitis 3 D CT SNP various changes OMC structures have been found, which usually met in a variety of combinations. Leading among them are middle turbinate abnormalities that were detected in 28 (56%) patients. In most cases (15 (30%)), they are two-sided. In 19 (38%) patients in the 3 D CT SNP marked bending paradoxical middle turbinate, 31 (62%) found the bull middle turbinate (soncha bullosa).

Findings:

1. All patients with inflammatory diseases of the maxillary sinuses are marked anatomical changes ostiomeatal complex structures that occur in various combinations.
2. Dental 3 D CT SNP is a highly informative method to assess changes in structures ostiomeatal complex and determine the amount of surgical treatment in patients with chronic sinusitis.

RUMatrix TEST IN COCHLEAR IMPLANTED PATIENTS.

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Keywords: cochlear implantation, speech in noise tests, Russian sentence Matrix test.

Aim: to evaluate the effectiveness of audioverbal rehabilitation in cochlear implanted (CI) patients using RUMatrix test in free field in noisy environment.

Materials and methods: 33 patients, aged from 5 to 40 years old, with more than 3 years experience with the CI, implanted in National Research Centre for Audiology and Hearing Rehabilitation were included in our study. 5 of these patients were implanted bilaterally. All patients underwent the following examinations: free field tonal audiometry, free field speech audiometry using polysyllabic words, free field speech audiometry using RUMatrix test.

Results: The results of our study showed the following results of RUMatrix test: the average speech perception of the first training tests was at the level $50 \pm 18\%$. The mean value of SNR was $1,8 \pm 3,4$ dB during the 2nd test training in adaptive mode; 3rd test in adaptive mode: average value of SNR was $0,7 \pm 3$ dB; average value of SNR was $-0,4 \pm 4$ dB after the speech processor's (SP) adjustments. Dynamics of the changes of SNR were $-1,2 \pm 3,8$ dB ($p < 0.05$). According to the free field tonal audiometry performed in all patients, the hearing thresholds were between normal and mild hearing loss (25-30 dB). The free field speech audiometry using polysyllabic words was performed in all patients. Their Speech Discrimination Scores (SDS) at the presentation level of 65 dB were about $60 \pm 20\%$ before the SP's fitting and $70 \pm 20\%$ after it. Dynamics of the changes of SDS were about $10 \pm 12\%$.

Conclusions: RUMatrix test is highly effective method of the estimation of speech intelligibility in patients undergoing clinical investigations in a noisy environment. The high comparability of RUMatrix test and tests in other languages makes it possible to use this test for international, multicentric studies.

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REMOTE INFRARED THERMOGRAPHY IN THE DIAGNOSIS OF ACUTE PARANASAL SINUSITIS.

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Background and objective:

The appearance of modern infrared (IR) systems with high resolution and the ability to record the temperature to within 0,02-0,07°C, allowed to detect the minimal changes in temperature, even on objects with small area of research. Computer programming, combined with thermography, provide real-time visualization and processing not only qualitative but also quantitative parameters of the thermographic picture, providing a detailed interpretation of the location, size, nature and structure boundaries of diseases' focuses.

Undoubtedly, important changes are in-depth study of infrared radiation of paranasal sinuses front, its quantitative and qualitative characteristics to enhance the diagnosis of various pathological conditions, and the prevention of complications.

Purpose:

Improving the quality of diagnosis of patients with acute paranasal sinusitis through the use of DIT.

Materials and methods:

The study involved 89 patients. In the control group - 35 men, with acute paranasal sinusitis - 54 people. The data are based on the results of patient examination and treatment of patients with acute paranasal sinusitis. The age of patients ranged 20-85 years. DIT held all thematic patients and the control group using thermograph of the 3rd generation based on microbolometer matrix format 384h288 elements with the built-in screen. Informational of thermograms was compared with: X-ray PNS; CT PNS.

Results:

1. Was established the distribution of distant infrared thermography of paranasal sinuses in healthy people depending on sex and age.

In the group of healthy individuals were found:

- The projection of the frontal sinuses T°C 31,7-33,0 ± 0,1°C
- Projection of maxillary sinuses T°C 32,5-34,1 ± 0,2°C
- Projection of ethmoid sinuses T°C 32,5-34,1 ± 0,2°C.

While conducting infrared thermography, in a group of healthy individuals it was found out that temperature in all surveyed areas, is higher in women than in men at 1,3°C, Pirson's correlation coefficient is $r = -0,024$;

2. Was discovered that DIT changes in patients with different localization of acute inflammation in the PNS:

- Acute sinusitis - termoassimetry was 1,1 ± 0,1°C.
- Acute maxillitis - termoassimetry was 1,5 ± 0,2°C.
- Acute ethmoiditis - termoassimetry was 1,3 ± 0,1°C.

3. Have created a systematic, digital thermographic database in acute inflammatory lesions of the paranasal sinuses.

4. Developed methodology of remote infrared thermography in patients with paranasal sinusitis.

Conclusion:

DIT will simplify the diagnosis of acute inflammatory diseases of the paranasal sinuses, and reduce material costs for its implementation. Therefore, this method can be successfully implemented in hospitals.

CHANGES IN THE PERILYMPH ANTIOXIDANT ACTIVITY IN EXPERIMENTAL ACUTE SENSORINEURAL HEARING LOSS

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Summary: The way of reproduction of the sensorineural hearing loss has been described in experiment on laboratory guinea pigs; results of change in laboratory parameters of perilymph and serum antioxidant activity under normal and experimental sensorineural hearing loss have been provided, and changes in perilymph antioxidant activity which were received as a result of the local glucocorticosteroid hormone (dexamethasone) administration have been analysed.

Keywords: *Acute sensorineural hearing loss (ASNHL), otoacoustic emission (OAE), antioxidant activity (AOA), glucocorticosteroids (GCS).*

Study objective: To create the experimental animal model of the sensorineural hearing loss. To investigate the antioxidant properties of perilymph and serum under normal and acute sensorineural hearing loss (ASNHL) in laboratory animals, and to estimate the effect of intratympanic glucocorticosteroid hormone administration on the antioxidant activity (AOA) of perilymph in experiment.

Materials and methods: 26 male guinea pigs were studied. Their level of hearing was determined by registration of the generated otoacoustic emissions (OAE) and by estimating the Preyer's acoustic muscular reflexes. The following parameters of serum and perilymph antioxidant activity was estimated in experimental animals: total antioxidant activity (TAA), ceruloplasmin, «ACL» and «ACW» as integral parameter of sufficiency level of the main fat-soluble and water-soluble vitamins respectively.

The animals were assigned into three groups. Arm 1 (9 animals, 18 ears) represented the control group. The perilymph and serum samples were collected from them, average values of ACL, ACW, AOA, ceruloplasmin were measured and calculated and were accepted as normal. In other animals the experimental hearing loss was reproduced under the stress integrated effect (by immobilization for two weeks, 3 hours per day), after that the animals were exposed to broad-band noise for 2 hours a day and administration of the ototoxic antibiotic (gentamycin sulfate) for 2 weeks in combination with immobilization. Almost half of cases required another course of antibiotics to achieve the significant hearing loss or deafness. Further the animals with experiment hearing loss were assigned into two groups: the guinea pigs from arm 2 (9 animals) were treated with intratympanic dexamethasone administration. The 8 animals from arm 3 (16 ears) were not exposed to any treatment. The AOA of perilymph and serum were also studied in animals from arms 2 and 3.

Results and their discussion: When comparing the laboratory parameters of the perilymph antioxidant activity in healthy animals and animals with experiment relative hearing loss there was a significant decrease in perilymph antioxidant activity in deaf animals that applied to all positions which were investigated ($p < 0,05$). In case of intratympanic steroids administration there was a significant increase in perilymph antioxidant activity ($p < 0,05$), however, during 2 weeks treatment the AOA parameters did not achieve the levels of the control group. The antioxidant properties of serum in a hearing loss also decreased but had a reactivation tendency during the treatment course without statistically significant changes.

Conclusions: It is rather difficult to reproduce the acute hearing loss model in experiment. In case of ONT the perilymph antioxidant activity is affected as well as serum antioxidant activity. Restoration of the perilymph antioxidant activity occurs earlier than serum antioxidant activity that may be related to intratympanic administration of dexamethasone which exhibits strong antioxidant effect.

THE NEW IN THE TREATMENT OF CHRONIC RHINOSINUSITIS IN ADULTS

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Relevance. To date, inflammatory diseases of the paranasal sinuses are the most common diseases in the structure of the ENT diseases. Almost every 8th (12.1%) the resident of the USA at the age of ≥ 18 years has suffered from rhinosinusitis (RS) within the last 12 months (Summary health statistics for U.S. adults: National Health Interview Survey, 2012). Local application of phytopreparations in out-patient treatment of RS can increase efficiency and reduce recovery terms.

Research objective is the assessment of efficiency of local treatment of chronic rhinosinusitis at adults with "Sinupret".

The research problem. Evaluating the efficiency of the Proetz displacement procedure for irrigating sinuses with "Sinupret" in the treatment of chronic rhinosinusitis in adults.

Materials and methods. The research is based on the results of the study of 30 patients aged from 18 to 70 years with an established diagnosis of chronic rhinosinusitis. The average age was 29.36 years. The patients were divided into two groups: main group (15 patients) and control group (15 patients). In the main group the Proetz displacement procedure for irrigating sinuses was carried out with "Sinupret" diluted with saline in a ratio of 1:10. To the patients in the control group irrigating of the sinuses was performed with 0.75% sodium thiosulphate solution. Patients of both groups have taken "Sinupret" per os, 50 drops 3 times a day. The course of treatment was 9 days with control examinations in an initial state (the 1st day), on the 3rd and 7th days from the initiation of treatment. Final examination was conducted on the 9th day. The 1st visit coincided with day of the beginning of therapy.

The dynamics of the patients was assessed by the severity of the signs and symptoms. Subjective symptoms – runny nose, violation of nasal breathing, reduced sense of smell, headache / facial pain. Subjective symptoms were assessed on a 5-point scale, where 0 – no symptoms, 5 – symptom expressed so strongly, as it can be imagined. Objective symptoms – swelling of the nasal mucosa, hyperemia of the nasal mucosa, nasal discharge (of mucosal, mucopurulent, purulent character). Dynamics of objective symptoms at rhinoscopy was assessed by 3-point scale, where 0 – absence of symptoms, 1 – easily expressed symptom 2 – moderately expressed symptom, 3 – strongly expressed symptom.

Results of research.

On the 1 st day of treatment the average score of subjective data in the main group and the control group was 14.73 and 14.93 points. The dynamics of the subjective assessment of the amount of discharge from the nose (the 9th day - 0.13 and 0.40 points) and violation of nasal breathing (9th day - 0.06 and 0.33 points) in the main group improved significantly faster than in the control group ($p < 0.05$).

Reduction of headache and smell recovery were observed in both groups, and were more expressed in the 1st group, but the differences did not reach conventional levels of statistical significance ($p > 0.05$).

Rhinoscopic image in the main group compared with the control was characterized by a faster disappearance of edema (3rd day – 1,8 and 2,0; 7th day – 0.46 and 1.20; 9th day – 0.13 and 0.40 points) and hyperemia of the nasal mucosa (1.33 and 1.80; 0.73 and 1.0; 0 and 0.13 points respectively) ($p < 0.05$). Complete purification of washing liquid from the nose was observed in the main group – in 9 (60%) patients, in the control group – in 3 (20%) patients.

Conclusion. Washing the nasal cavity with "Sinupret" solution during oral administration of this preparation allows to achieve a better clinical outcome compared to washing with sodium thiosulfate

ANATOMICAL VARIATIONS OF OSTEOMEATAL COMPLEX AMONG THE PATIENTS WITH CHRONIC ODONTOGENIC MAXILLARY SINUSITES, CT-FINDINGS

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Background: Formation of chronic purulent sinusitis is caused by the action of a variety of factors, which occupy an important odontogenic place. In modern literature, there is widely spread to classify chronic sinusitis as a rhinogenic and odontogenic sinusitis. According to disease-causing reasons, patients, as usual, are going for treatment with doctor otolaryngologist or dentist. Treatment methods are depending on the specialization of the doctor. At the same time in literature there is only little research on the pathogenesis of the disease and the condition of the complex at osteomeatal etiology of odontogenic maxillary sinusitis

Keywords: *Maxillary sinusitis, osteomeatal complex etiology of odontogenic*

Aim: To study anatomical variations of osteomeatal complex in chronic odontogenic sinusitis patients.

Materials and methods: In retrospective chart analysis of 45 patients (N): 26 male and 19 female with odontogenic sinusitis, all aged between 18 and 65 years, anatomical variations of osteomeatal complex according to endoscopy and computed tomography examinations (CT) have been examined. The development of odontogenic sinusitis was caused by tooth extraction, periodontal, endodontic surgery, a foreign body. They were all treated at Minsk Hospital N11.

Results: Unilateral purulent nasal discharge was the most common symptom. It was found that all patients had anatomic prerequisites for a block of natural ostium of the maxillary sinus: 36 patients had a deformation of the nasal septum (80%), in most cases, in the cartilage and bone sections (N = 32), 6 patients had Bulla ethmoidalis, onodi cells and Haller cells (N = 5). These CT completely correlated with the results of an endoscopy (P = 0.02).

Conclusions: In the pathogenesis of odontogenic maxillary sinusitis, anatomical endonasal variations are one of the reasons for blocking the natural ostium, all sinusitis was associated with sinus obstruction ($p < 0,001$) and that must be considered in the surgical treatment of patients. The research results indicate the necessity for an interdisciplinary decision on the tactics of treatment of the patient with chronic sinusitis, odontogenic etiology. In case of necessity of surgical treatment, at the same time, readjustment of maxillary sinus and correction of osteomeatal complex, is economically beneficial and clinically justified action.

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ENDOSCOPIC ENDONASAL SURGERY SIMULATOR

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Background. Functional endoscopic sinus surgery (FESS) is currently the gold standard of treating a great deal of nose and paranasal sinus diseases. Physician must know anatomy of the nose as well as must have manual dexterity skills to perform FESS with flying colors. The key point of surgeon education is how to get practical skills and not to do harm to patient. The best thing to FESS training is to separate it into three grade levels: 1. To acquire technical skills thanks to simulator devices; 2. To learn anatomy of the nose due to cadaveric dissection; 3. To learn FESS in the operation theater step-by-step.

Keywords: Endoscopic endonasal surgery simulator, Nasal model, Training, Education, Simulation, Endoscopic sinus surgery skills, Resident, Minimally invasive surgery, FESS.

The **goal** of this study was to develop endoscopic endonasal surgery simulator to master technical skills of using surgical instruments through endoscopic view inside the nasal model. The objectives of current study were: 1. To develop the tasks to master technical skills of using surgical instruments through endoscopic view inside the nasal model; 2. To carry out efficiency audit of using endoscopic endonasal surgery simulator to acquire practical skills.

Methods. To succeed in the study there was developed endoscopic endonasal surgery simulator in our department (patent number 158398 RU). The component parts of our trainer are the nasal model and the support of it. The cylindrical cartridges are used to simulate the nasal model. User must perform different tasks depending on the configuration of every cartridge: 1. To introduce Freer elevator into the nasal model and take it off; 2. To probe the halls of round shape and various diameter by ball-shaped ends probe; 3. To contour the numbers from 0 to 9 by ball-shaped ends probe; 4. To insert nasal tampons into each section and take it off by Blacksley straight forceps; 5. To cut out paper strip by through-cutting straight Blacksley shape forceps; 6. To cut out paper strip by Stammberger backward cutting punch; 7. To cut out paper strip by nasal straight scissors.

To evaluate the benefit of our simulator 9 otolaryngology residents with no operative experience in FESS were recruited into the study. Each user was given a brief tutorial concerning the functionality of educational tool and demonstrated the tasks to be performed. Then participants exercised 1 hour a day during 5 days. At the beginning of training course as well as at the end of it residents were given the test. Every step of the study was recorded by video camera.

Task-performance time and the number of technical accuracy mistakes were assessed to explore participant's proficiency.

Results. At the beginning of training course task-performance time was: 1. 183 ± 11 sec; 2. 181 ± 10 sec; 3. 336 ± 15 sec; 4. 95 ± 6 sec; 5. 126 ± 20 sec; 6. 107 ± 20 sec; 7. 176 ± 30 sec. 5 days later it was: 1. 110 ± 10 sec; 2. 121 ± 7 sec; 3. 198 ± 11 ; 4. 70 ± 5 sec; 5. 41 ± 9 sec; 6. 52 ± 7 sec; 7. 97 ± 26 sec ($p < 0,05$).

At the beginning of training course the number of technical accuracy mistakes was: 1. 25 ± 2 ; 2. 34 ± 3 ; 3. 47 ± 5 ; 4. 24 ± 2 ; 5. 12 ± 2 ; 6. 11 ± 2 ; 7. 27 ± 3 . 5 days later it was: 1. 8 ± 2 ; 2. 16 ± 2 ; 3. 26 ± 3 ; 4. 13 ± 2 ; 5. 5 ± 1 ; 6. 5 ± 1 ; 7. 13 ± 2 ($p < 0,05$).

Discussion. On the basis of these data it was revealed that task-performance time and also the number of technical accuracy mistakes were reduced after practice. Thus, it demonstrated the validity of endoscopic endonasal surgery simulator.

Conclusion. Endoscopic endonasal surgery simulator was developed in our department to master technical skills of using surgical instruments through endoscopic view inside the nasal model. User has the ability to get manual dexterity skills of FESS thanks to introduced tasks. There is a significant tendency towards acquiring proficiency at FESS.

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ENDOSCOPIC ENDONASAL DACRIOCYSTORHINOSTOMY OUTCOMES

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Summary. Dacriocystorhinostomy (DCR) is typical surgical solution for treating of the nasolacrimal duct obstruction. The most common way to reach this aim is to make a fistula between the lacrimal sac and nasal cavity.

There are two main approaches to the lacrimal sac. The first one suggests a small skin incision nearby the medial canthus (to avoid vessels damage and also due to aesthetic reasons). Then the surgeon removes the bone and reaches the lacrimal sac. The operation is ended by making a connection with the nasal cavity.

The second approach is endoscopic. 15 or 20 years ago it was thought to be less successful than external one. But with technical progress the statistic data has changed, and now success rates seem to be equal. Now, regardless of approach type, the DCR efficiency is estimated in 75-99%. Such high percentage of failures lead us to analyze surgical outcomes of the operation and probable causes of failure.

Keywords: *dacriocystorhinostomy, endoscopic dacriocystorhinostomy, nasolacrimal duct obstruction*

Aim of our study was to evaluate the success rate and to reveal most common causes of failure of endoscopic endonasal DCR in patients with nasolacrimal duct obstruction (NLDO).

Patients and methods. This prospective study included eyes of patients with unilateral NLDO who underwent endoscopic endonasal DCR with using of laser between October 2014 and February 2016 at the Otorhinolaryngology Department, Pavlov State Medical University of St. Petersburg. Informed consent was obtained from all subjects.

All patients underwent endoscopic endonasal DCR with using of laser. Operation included following stages: after 1) adrenaline solution application on nasal mucosa; 2) local anaesthesia was performed by lidocaine solution application and articaine solution injection. Than 3) nasal mucosa was processed by semiconductor laser in area of lacrimal sac. 4) Bone was removed by chisel where needed. After finding of lacrimal sac 5) its envelope was perforated by laser. Operation was ended by 6) making of regular anastomosis between sac and nasal cavity. After operation the lacrimal system was irrigated to confirm bypass existence. The patients were told to irrigate their nasal cavity with normal saline solution to clear away mucus and fibrin deposits. Tobramycin eye drops were used 4 times per day for 3 week.

Results. The study group included 48 patients (48 eyes). Study group included 46 females, 2 males with unilateral NLDO who underwent endoscopic endonasal DCR with using of semiconductor laser. The mean patient age was 61.1 years old (range, 26 to 83 years old).

Operation was successful in 42 patients (42 eyes, 87,5 %). Reoperation was conducted in 6 patients (6 eyes, 12,5%). In 1 case (1 eye, 2%) re-operation was failed. There were no postoperative complications like intracanalicular damage or orbital haematoma.

According to our results and literature data we believe that general causes of failed DCR are unique anatomic features of nasolacrimal duct of a patient (including such features as too big or too small or fibrosed lacrimal sac) and high regenerative ability of nasal mucosa. These and other features could be successfully avoided with using of navigation system and laser.

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ECONOMICAL EVALUTION OF SUDDEN SENSONEURAL HEARING LOSS TREATMENT.

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Key words: *sudden sensorineural hearing loss, steroids, economic interest, to analyse the monitoring of economic benefits.*

The **object** of our research is analysing the monitoring of economic benefits of the treatment of acute sensorineural hearing loss with different methods of administration of steroid hormones. The aim of our study was to determine the method of administration of steroid hormones, which provide most effective treatment of sudden sensorineural hearing loss and reducing patient bed days in hospital.

The **methodology** of the mathematical statistics and the parametrical methods of the statistical processing of the qualitative were use in this work.

Results: Sudden hearing loss - or sudden sensorineural hearing loss - is defined as a loss greater than 30dB in three contiguous frequencies, occurring over a period of less than three days. It found that in the structure of morbidity of patients receiving treatment on the basis of our department, SSNHL loss takes 3.02%. It is diagnosed in about the same number of men and women in middle age about 51 years old. The mean hospital stay was 11.24 days patients of the middle bed day. The average cost of treating patients with sudden sensorineural hearing loss costs approximately 6.15 conventional unit. It was found the time of treatment patients who did not receive steroids in hospital was about 11.7 bed-days, the average score in the treatment has managed 6.401 conventional unit . The average bed day patients treated with intravenous steroids was 10.3 days, the total amount of treating this group of patients was 5.63 conventional unit. The average time of treatment of patients with catheterization of the Eustachian tube, and to the introduction of steroid hormones was 10.75 days, the cost of treatment of this group of patients was 5.8 conventional unit. The time of treatment group of patients with the introtympanic introduction of steroids was 12.83 days and the average amount of treatment was approximately 7.31 conventional unit.

Conclusions : Treatment of sudden sensorineural hearing loss with with the use of steroid hormones decreases the disability of these kind of patients, reduces the time spent in the hospital, significantly abbreviates the cost of treatment. The most long-term treatment of the group of patients with introtympanic introduction of steroid hormones caused their late introduction in the absence of results from the prescribed treatment.

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FIRST AUDITORY BRAINSTEM IMPLANTATION IN RUSSIA: SURGICAL RESULTS AND POSTOPERATIVE AUDIOLOGICAL DEVELOPMENT

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Since 1979, when first auditory brainstem implantation (ABI) was carried out in Chicago, USA, only 600 patients all over the world have been implanted and, to the best of our knowledge, no one has received an auditory brainstem implant in Russia.

Two patients (aged 24 and 25) with neurofibromatosis II, who underwent VIII cranial nerve neuroma excision and a 2 y.o. patient with cochlear aplasia and absence of vestibulocochlear nerves were implanted with the ABI CONCERTO (MED-EL, Innsbruck, Austria) in Saint Petersburg in December 2014. The ABIs were implanted on the right side because localization of the right cerebellum lobe was more convenient for the surgeon. The retrosigmoid approach was used. An S-shaped incision was made in the postauricular area, which proceeds to the parieto-temporal area as close as possible to the zone of sigmoid and transversal sinuses junction. Craniotomy was performed. The implant bed in the parieto-temporal area was prepared. The cerebellum lobe was retracted. The approach to the brainstem was performed via lateral recess of the IV ventriculum. Cerebellopontine angle nerves were visualized and the vestibulocochlear nerve was identified. The optimal zone for the active electrode placement was selected with the use of placement electrode and auditory brainstem response recording. The active electrode was placed and fixed. The wound was closed layer-by-layer. No intraoperative or postoperative complications were observed, as of 15 months post implantation.

The ABI processor was activated 6 weeks postoperatively. Free field thresholds at 500 and 1000 Hz accounted for average 80 dB at 10 days after activation. Within the first 2 weeks of rehabilitation the patients began to increase their vocal activity and used voice for communication; additionally, they reacted to knocks, claps, and loud voices. The LEAQ and LEESPQ scores which indicate that the patients' audiological development were age-appropriate. LEAQ scores were at expected values at 2 months and well-above the expected values at 5 months. LEESPQ scores were at, or near, the norm curve at the 2 and 5 month intervals. All the 3 patients wear the ABI processors during waking hours.

As can be seen from above, the ABI can be a good solution for auditory development of patients with retrocochlear pathology.

CONTACT LASER TECHNIQUE FOR CORRECTION OF POSTOPERATIVE NASAL CAVITY ADHESIONS

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Background

Endoscopic rhinosurgery is growing rapidly nowadays. According to various authors, the incidence of adhesions after nasal surgery ranging from 39 to 55%.

Synechia (adhesion, scar tissue) of the mucosa occurs when the two wound surfaces remain in contact for some time in the postoperative period. At the initial stage there are

mucofibrinous bands between the two contacting surfaces in the nasal cavity, which may eventually form a scar. The presence of adhesions in the nasal cavity is not an absolute indication for their removal. Surgical correction is required just in the case of clinical manifestations: disorders of ventilation and drainage of nasal sinuses, reducing air flow through the upper respiratory tract, crusting in the nose.

Keywords: *nasal cavity adhesions, contact laser surgery.*

Objective

The aim of this study was to analyze the structure of rhinological interventions, which had led to adhesion in the postoperative period. In addition, we wanted to evaluate our experience of using laser technology in the correction of postoperative adhesions.

Methods

Medical history of patients with nasal cavity adhesions, who received treatment in ENT department of First Pavlov State Medical University of St. Petersburg in 2015, were analyzed. Anamnesis, complaint characteristics and clinical examination were performed.

Dissection of adhesions was carried under local application anesthesia (Sol. Lidocaini 10%), Sol. Ultracaini 1:100,000 used if it was required. A rigid endoscope 0° used for intraoperative control. An incision was performed by semiconductor laser (wavelength - 0,81 ± 0,03 mkm), in contact continuously mode with power 8 watts. The exposure time of 5-20 seconds.

Results

All over the study period, 10 patients with adhesions of the nasal cavity (7 male and 3 female) was identified. The average age of patients was 41 years (max. - 78, min. - 24). Leading complaint was a violation of nasal breathing.

In the structure of previous interventions on the nose septum surgery was dominated - 4 cases (57%); radiofrequency knife polypectomy - 1 case (14%), endoscopic sinusotomy - 1 case (14%) and submucosal vasotomy - 1 case (14%).

In two (20%) cases, adhesions occurred after a nasal fracture, in one (10%) case it occurred after nasal packing which was performed to stop the epistaxis. One of 10 patients had multiple surgeries on the adhesions in the nasal cavity. 7 patients had a bilateral localization of adhesions.

Adhesions were removed successfully in all patients. Relapse was not observed.

Conclusion

Clinical experience of our department correlated with the data of other authors and show that the contact laser technology can successfully used in the treatment of nasal cavity adhesions. It can save the anatomical structures of the nasal cavity and restore it lumen. Laser technology is also effective for the prevention of relapse adhesions in the nasal cavity.

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DIFFERENTIAL DIAGNOSIS OF HYPERPLASTIC PROCESSES OF THE NASOPHARYNX.

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Endoscopy of the upper respiratory tract allows visualizing the pathology of this region. Nevertheless, hyperplastic changes of the epithelium are macroscopically not visible at the early stages, which may delay tumor diagnosis. The results of differential diagnosis of hyperplastic processes of the nasopharynx in patients with recurrent respiratory papillomatosis are presented in the article. The study revealed the relationship between histological conclusions and data of contact endoscopy.

Key words: *nasopharynx, diagnostic methods.*

The **aim** of our study was the improvement of differential diagnostics of hyperplastic processes of the nasopharynx in patients with recurrent respiratory papillomatosis using the contact endoscopy.

Materials and methods. The study surveyed 17 persons aged 19 to 41 years: 11 men and 6 women, with revealed hypertrophic tissue in the nasopharynx as well as with an established diagnosis of recurrent respiratory papillomatosis. Under local anesthesia the application of a 1% solution of methylene blue was used on the zone of hypertrophic tissue for 2 minutes. The solution excess and nasal secret was removed by aspirator. To visualize the superficial layers of the epithelium the front side view 30° contact microendoscope 4.0 mm with the increase of 60-fold was mounted to the surface of hypertrophic tissue. Obtained digital images were recorded for subsequent data processing. Biopsy of hypertrophic tissue was produced for histological examination.

Results. All patients with recurrent respiratory papillomatosis had uniformly painted nasopharynx mucosa, with pathological vessels tortuosity. The nuclei placed in the center of the cell, as well as nucleo-cytoplasm ratio was 1:2. In 11 cases it was noted a non-uniform arrangement of cell elements with a predominance of fusiform cells. That was regarded as papilloma of the nasopharynx. The diagnosis had been histologically verified and than papillomas laser removal was made. In other 6 cases cells were homogeneously distributed. The nuclei were slightly enlarged, and they had rounded edges. Location of the cellular elements was uniform, clearly visualized boundaries of cells. According to the histological conclusion: chronic inflammation of the lymphoid tissue.

Discussion. In all cases of our research a correlation between histological conclusion and data of contact endoscopy was revealed. Typical changes of the mucosa for inflammatory and hyperplastic process were identified. That makes possible differential diagnostics of the nasopharynx diseases with this method to carry out. In this regard, it considers reasonable and promising to use the method of contact endoscopy in addition to the standard examination of the patient.

Conclusions. Contact endoscopy is a noninvasive, affordable method that allows to assess the condition of the nasopharynx mucous.

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INFLUENCE OF CAVITATING, LOW-FREQUENCY ULTRASOUND SOLUTIONS ON THE TRANSPORT FUNCTION OF CILIATED EPITHELIUM IN PEDIATRIC PATIENTS WITH ACUTE BACTERIAL RHINOSINUSITIS.

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The pathogenetic processes of acute rhinosinusitis lead to disruption of the process of mucociliary transport, disrupted the movement of the cilia of the ciliated epithelium. It promotes desquamation of ciliated epithelium, changes in the composition of nasal discharge. The use of low-frequency ultrasound is cavitating sodium chloride solution 0.9% in the complex treatment of acute rhinosinusitis shows good results the effectiveness of this technique.

Keywords: *mucociliary transport, low-frequency ultrasound, saccharine test, acute rhinosinusitis, the solution is cavitating.*

Today remains a topical problem of acute bacterial inflammatory diseases of the paranasal sinuses, especially in children. [1,3,4] Well-functioning mechanisms of protection (ventilation, filtration, mucociliary transport system, cough) provide cleaning and drainage function of the respiratory tract, the restoration of damaged functions of the respiratory system.[1,4] Various physical, chemical, biological and other factors have a negative effect on mucociliary clearance of the mucous membrane of the nasal cavity and paranasal sinuses, disrupt the movement of the cilia of ciliated epithelium, which contributes to its desquamation, changes in the composition of nasal secretions.[1,2,4] The search for new non-invasive, gentle, restoring the normal operation of the mucociliary clearance methods of irrigation nasal mucosa in acute bacterial rhinosinusitis in children is an urgent task today. One effective way of nasal rehabilitation, recovery of mucociliary clearance is irrigation of the nasal mucosa of 0.9% sodium chloride solution, treated with low-frequency ultrasound, by means of ultrasound FOTEK AK 101. kavitirovanii occurs microvibration - a kind of micro-massage at the cellular and subcellular levels, processes are accelerated and enhanced dissolution microcirculation, increases the permeability of cell membranes. In the process of concentration changes of the ions and molecules in the environment around the cell membrane and is amplified in the diffusion cell. [1,5]

Objective: To demonstrate the efficacy of low-frequency ultrasound activated solution for acute rhinosinusitis. Tap on any day of treatment the patient is recovering time mucociliary transport.

Materials and methods. The study was conducted on the basis of the children's hospital from 2013 to 2015goda. The study involved 95 patients with a diagnosis of acute bacterial rhinosinusitis. The average age of 10.3 years, boys - 47 Girls - 48. To confirm the diagnosis of acute bacterial rhinosinusitis, all patients underwent complex examination including examination of the patient, common clinical laboratory tests, X-ray study or a CT scan of the paranasal sinuses, the definition of cytology discharge nasal mucosa, microbiology, discharge from the middle nasal passage. Low-frequency ultrasound cleaning of the nasal cavity was performed using ultrasound Fotek AK 101 with a resonance frequency of 25 kHz. As a solution to low frequency ultrasound cavitation using sodium chloride 0.9% solution.

The method of single-blind randomization, patients were divided into two groups. The first - the main group of 54 patients, mean age - 10.4 years, boys - 29, girls - 25. In the second - a control group of 41 patients, mean age - 10.1 years, boys - 22, girls - 19. The main group received irrigation nasal mucosa cavitating low-frequency ultrasound 0.9% sodium chloride solution. The control group received the same pattern nasal spray containing saline solutions.

To evaluate the functional state of the mucous membrane of the nasal cavity before, during and after treatment, the definition of mucociliary clearance using a polymer soluble methyl cellulose film, which includes saccharin and methylene blue. Determination of mucociliary transport was carried out on the side of the injury of the paranasal sinuses. Evaluation was carried out in the first, third and sixth days of examination of the patient.

Results. In the study group on the first day of observation of the patient saccharin time was 18.6 minutes. At the same time during the front and rear rhinoscopy it was observed staining mucous middle and lower turbinates, nasal septum. On the third day of treatment saccharin time was 13.9 minutes. It noted a significant shortening of the time saccharine test and mucociliary clearance recovery. Subjectively, the third day of treatment noted a decrease in nasal discharge, nasal congestion relief, improved well-being. Objectively nasal obstruction persisted in only 12.9% of patients, a slight swelling of the lower nasal turbinate was present in 23.2% of patients. Nasal secretion was assessed objectively as a muco-purulent in 68.4% and 31.6% - as mucous. On the sixth day is not marked a significant change in mucociliary clearance, reveal a violation of its physiological properties of the mucosa. Saccharine time is 11.6 minutes. During the final examination 38.6% of patients had at a small amount of nasal secretion, mucous character in 97%.

The new sugar control group during the study on the first day was within 19.4 minutes. The statistical accuracy of this index compared with the main group examinees confirmed $p > 0,05$. On the third day of treatment saccharin time was 16.3 minutes. Statistically, there was a significant increase in the index compared with the main group for the same period of time. In 56.1% of patients recovered nasal breathing, while in the study group on the third day of treatment, the rate observed in 77.8%, $p < 0,05$. At 43.9% in this group versus 70.4% of the main group noted the predominance of mucous secretion scanty, $p < 0,05$. On the sixth day of treatment, the restoration of the mucociliary clearance passes. The sugar time is 12.3 minutes, a statistically significant increase in the values of this indicator in comparison with the main group examinees is not observed, $p > 0,05$.

Conclusions.

This study showed that in acute bacterial rhinosinusitis dramatically inhibited mucociliary clearance of the mucous membrane of the nasal cavity.

Irrigation of nasal mucosa activated, low-frequency ultrasound, 0.9% sodium chloride solution, aimed at cleansing the mucous membrane of the nasal cavity and paranasal sinuses, allowing almost completely restore the activity of the mucociliary clearance on the third day of treatment.

Application of this method not only promotes the elimination of inflammation in the paranasal sinuses, and rapid recovery of the functional state of the ciliated epithelium.

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LIMITATION OF LIFE IN PATIENTS UNDERGOING PYO-SEPTIC COMPLICATIONS OF PURULENT OTITIS MEDIA

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Keywords: *Complications of purulent otitis media, otogenic, disability.*

Objective: This systematic review aimed to determine the nature of the constraints of life in patients with complications of suppurative otitis media

Relevance: Relevance of the topic due to social and medical significance of the prevalence of the tendency to increase in complicated forms of otitis media as an unpredictable outcome of the disease and the high mortality rate too highly developed countries.

Tasks:

- 1.To characterize the prevalence of complicated forms of purulent inflammation of the middle ear in the past 20 years according to ENT department of General Hospital of Minsk.
- 2.Set prognostically unfavorable factors low of complications of acute suppurative otitis media.
- 3.Assess the degree and nature of hearing loss in patients with a complication of acute otitis media.

Materials and methods: over the past 20 years at ENT department of the hospital annully observed pyo-septic complications of varying ENT etiology, complicated forms of acute purulent otitis media according to our data presented in patients aged 35 to 60 years without gender differences.

Results: We first analyzed the cases in catamnesis definition of disability after the complicated forms of acute purulent otitis media ,obtain information about the nature of persistent residual effects in the form of restrictions on movement and self-service on the background of persistent neurological disorders as well as vision loss and deafness, established a leading risk factor for the formation of a low rehabilitation potential of patients with otogenic intracranial complications is a syndrome of mutual burdeninig due to hydrocephalic-hypertensive(coma) and systemic inflammation(sepsis) syndromes on a background of comorbid disease in the elderly.

Conclusions:

- 1.A group of high risk of otogenic complications consists mainly of men of working age.
- 2.According to a study prevails acute purulent otitis media with over oligosymptomatic.
- 3.The prevalence of bilateral hearing loss of 3-4 degree after suffering intracranial complications.
- 4.The high risk of death within the first 2 days after admission or storing each 2 elderly patients on the background of comorbid pathology.persistent constraints of life: mutual burdeninig syndrome as purulent meningitis and sepsis.

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THE SIMPLIFIED VERSION OF THE OLDENBURG SENTENCE TEST

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Background: speech audiometry has become a fundamental tool in hearing-loss assessment. It is routinely carried out in the audiological practice. A number of sentence speech tests in noise have been developed over the past several decades. One of them is the Oldenburg sentence test (OLSA). It has two versions: the full one (RuMatrix test) and the simplified version (Simplified RuMatrix test). Objective: to evaluate the Simplified RuMatrix test.

Procedure: overall, 34 normal-hearing Russian native listeners (20 adults and 14 children) participated in the research. Results: validity of the Simplified RuMatrix test confirmed by the uniformity of speech material and comparability of the results of the simplified version with full one.

Keywords: *speech audiometry, speech perception, Oldenburg sentence test.*

Introduction. Speech audiometry is one of the standard measures used in hearing diagnostics. It is complementary to pure tone audiometry, which only gives an indication of absolute perceptual thresholds of tonal sounds, whereas speech audiometry allows performing a quantitative assessment of speech intelligibility. Speech testing is of major importance for hearing diagnosis, during the fitting of hearing systems (such as hearing aids, cochlear implants), or for rehabilitation management.

Speech tests using sentences presented in noise reflect everyday communication processes better than tests using single words in quiet. A number of such sentence tests have been developed over the past several decades. They are: HINT (Hearing in Noise Test), SSI-ICM (Synthetic Sentence Identification with Ipsilateral Competing Message), and OLSA (Oldenburger Satztest).

OLSA test has been developed in the Oldenburg University, Germany. It has been designed for measuring the speech intelligibility of sentences in noise. There are full and simplified versions - RuMatrix Test and Simplified RuMatrix Test, respectively. Normative data for the full version have been obtained for adults [Boboshko M. et al., 2015]. The full version has been used for children; however it had been found too difficult for them to perform the test [Boboshko M. et al., 2014]. That is way the development and further evaluation of the simplified version of OLSA test (Simplified RuMatrix test) has been started.

Objective: to evaluate the Simplified RuMatrix test in normal hearing adults and children.

Design. The Simplified RuMatrix test has a matrix structure, in which the syntax is fixed (such as number-adjective-object), but the semantics are unpredictable, for example, "Five red rooms". The base matrix contains 10 numerals, 10 adjectives, and 10 nouns. The Simplified RuMatrix test includes 10 lists with 14 sentences of 3 words each. In comparison, the full version (RuMatrix Test) has longer sentences and greater number of sentences per a list (each list includes 20 sentences of 5 words). The speech material is presented in stationary noise which had been generated by multiple superpositions of the test material 280 items (so that the long-term spectrum of the noise matched the long-term spectrum of the sentence). The noise level is fixed during the test and the speech level varies during the adaptive measurement procedure to converge to fixed speech intelligibility (e.g. 20%, 50% or 80%). Thus a speech reception threshold is determined (SRT_{20} , SRT_{50} and SRT_{80} , respectively). The speech and noise are presented monaurally through headphones.

34 normal-hearing native Russian listeners (20 adults at the age from 18 to 40 years old and 14 children aged 7 - 10 years old) participated in the research.

Test consisted of two parts: in the first part, the training effect was estimated both for adults and children, with three lists being presented for each of them. In the second part, the uniformity of speech material was examined in adults and normative data were collected in children. SRT₂₀ and SRT₈₀ were determined for all lists in adults; SRT₅₀ and SRT₈₀ were measured in children.

Results:

The training effect amounted to 1,0 dB SNR in adults for Simplified RuMatrix Test (for the full version it was equal to 1,1 dB SNR).

Uniformity of speech material. Standard deviations SRT₂₀ and SRT₈₀ from the mean values were less than 1 dB SNR for all 10 lists (SRT₂₀ = -12.8 ± 0.6 dB SNR; SRT₈₀ = -8.6 ± 0.6 dB SNR), that showed high uniformity of speech material.

Comparison of adult results of Simplified Matrix Test and RuMatrix Test. A good agreement between the Simplified Matrix Test results and those of the RuMatrix Test ones has been obtained in adults. The threshold intelligibility of 50% (SRT₅₀) was -10,2 dB SNR, the slope of psychometric function was equal 14,2 %/dB for Simplified RuMatrix Test, and SRT₅₀ = -9,5 dB SNR and 13,8 %/dB for the RuMatrix Test, respectively.

Conclusions and recommendations:

Validity of the Simplified RuMatrix test was confirmed by the uniformity of speech material of the test and comparability of the results of the simplified version and the full one.

Further Simplified RuMatrix Test evaluation is required to obtain normative data for children of different ages groups.

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EVALUATION OF NASAL BONE FRACTURE IMAGING IN ADOLESCENTS AND YOUNG ADULTS

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Keywords. Otorhinolaryngology, nasal, trauma, adolescent, x-ray, computed tomography.

Introduction. Children and adolescents frequently experience maxillofacial trauma, but there is a great disparity between pediatric and adult patients. Nasal bones are less common site of fractures in pediatric population compared to adults, although fracture frequency in adolescent population more closely resembles that of adults. Modern computed tomography (CT) is the gold standard for viewing craniofacial fractures, but one of the main disadvantages of CT is the high radiation dose. For this reason it is not first line method to prove the clinical diagnosis of nose fracture in pediatrics in the Children's Clinical University Hospital.

Aim. To find out the most appropriate method for proving the diagnosis in adolescents and young adults.

Materials and Methods. Retrospectively collect and analyze medical records of adult patients in age from 18 to 21 admitted to the Pauls Stradiņš Clinical University Hospital and children from age 13 (females) and 14 (males) to 17 admitted to the Children's Clinical University Hospital Otorhinolaryngology department with diagnosis "Fracture of nasal bones" S02.2 (ICD-10) in a time period 01.01.12 - 31.12.14. Statistical analyses were performed using SPSS software and $p < 0,05$ was considered statistically significant. Cross tabulation with χ^2 test was used to determine if there was any connection between positive radiologic findings on plain film radiography (x-ray), CT and treated patient rate as well as between visual deformity of the nose on initial physical exam and treated patient rate.

Results. X-ray proved to be an unreliable evaluation method of nasal bone fractures. In the age group of adolescents and young adults it has no or little impact on choice of therapy made by ENT specialist ($p=0,541$). Unsurprisingly, CT scans yield positive results in most of the cases, however, statistically the result of CT has no influence on specialists decision to perform the reduction of nasal fracture ($p=0,874$). Visual deformation of the nose on initial physical exam proves to be the key factor in making the decision to reduce the fracture ($p=0,001$).

Conclusion. This study presents x-ray and CT as inefficient methods for assessment of nasal trauma, because the positive result is not essential for evaluating the need for operative treatment. We demonstrate that the decision regarding operative treatment of nasal trauma is based on clinical findings as suggested by variety of studies and textbooks on the subject. Moreover, the results of this study puts up for debate how should clinicians examine nasal bone fractures in young adults, especially in those who are under-aged. If nasal bone documentation by imaging is required due to legal reasons, physicians should seek alternative imaging modalities such as high resolution ultrasonography.

A RETROSPECTIVE ANALYSIS OF NASAL BONE FRACTURES IN ADULTS IN P.STRADIŅŠ CLINICAL UNIVERSITY HOSPITAL

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Keywords: otorhinolaryngology, nasal trauma, nasal bone fracture, adolescent, violence.

Introduction. Nasal trauma plays a large and important role in the field of craniofacial injury. Nasal bone fractures account for greater than 50% of all facial fractures in adults. The most common mechanism of injury is blunt trauma to the midface, most frequently due to the physical altercations and falls. As the bones and cartilage of the nose provide aesthetic and structural support for the midface and airway, it is necessary to ensure proper evaluation and management to decrease the rate of complications such as nasal airway compromise and nasal deformity.

Aim. To obtain descriptive statistics regarding the adult population with the diagnosis “Fracture of nasal bones”, to determine the most common traumatic causes, as well as to establish a typical patient profile and nasal trauma risk groups to prevent further injuries and optimize patient care.

Materials and methods. Retrospectively collect and analyze medical records of patients admitted to the ENT department and Emergency Care centre of Pauls Stradiņš Clinical University Hospital with the diagnosis “Fracture of nasal bones” S02.2 (ICD-10) in a time period 01.01.12 - 31.12.14. Statistical analysis of data performed using IBM SPSS software (descriptive statistics, crosstabs with χ^2 test). $p < 0,05$ was considered statistically significant.

Results. A total of 297 patients in the age group of 15 to 91 years old were evaluated for the study. The overall ratio of males to females was 3.6:1. Younger adults under the age of 30 were significantly more likely to sustain nose fractures - 55.22% of all cases. Nose fractures most commonly tend to occur in autumn- 32.5%. The most frequent emergency care visiting hours were between 0 AM and 4 AM - 81 (27 %) patients, 71.43% of them had alcohol intoxication. 133 (48.2%) of all patients sought for medical help during weekends. The most common cause of injury was violence ($n=171$, 57.6%), followed by falls ($n=63$, 21.2%), sports trauma ($n=32$, 10.8%) and other causes (road accidents, occupational trauma, epilepsy) ($n=20$, 6.6%). Moreover, among those who were involved in violence- 98 (78.4%) patients were under the influence of alcohol when receiving emergency care. There is no evidence that dislocation to the left side is more frequent in criminal trauma than dislocations to the right. No correlation between the etiology of trauma and full moon phase period was found ($p > 0.05$).

Conclusions. This study provides an overview of nasal fractures in adult population that helps illustrate the trends and characteristics of this type of trauma. It is useful to predict the most frequent time of the day, day of the week and month of the year when patient visits otorhinolaryngologist in emergency care department. The study has shown a typical profile of the patient with a nasal trauma presenting to ENT specialist – a 33 years old man after alcohol intake with tendency of aggressive behaviour.

A PATIENT WITH SUPERIOR SEMICIRCULAR CANAL DEHISCENCE

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Keywords: superior semicircular canal dehiscence, autophony, vertigo

Introduction: Superior semicircular canal dehiscence (SSCD) is the absence of bone overlying the top of the superior semicircular canal. This provides abnormal communication between the inner ear and the middle cranial fossa. The opening leads to the “third window effect”, disturbing the endolymphatic movement, resulting in acoustic energy loss and abnormal vestibular function, sensitive to bone-transmitted sound and intracranial pressure changes.

Case report description: A 38-year-old woman presented to the ENT department of Pauls Stradiņš Clinical University Hospital (April 2011) with moderate episodes of vertigo, tinnitus and hearing impairment in her right ear. The MRI and audiogram showed no abnormality. Preliminary diagnosis: Menier's disease. Therapy with betahistine was started. A year later the patient presented to the doctor's office with additional complaints of right-sided aural fullness and headaches. VNG test revealed mild right side peripheral vestibular weakness. The following diagnosis was applied: Menier's disease, trigeminal neuropathy. In 2013 the patient presented repeatedly with symptoms worsening: own voice echoes in her head, patient perceives the altered sounds of her heartbeat and footsteps. Vertigo is caused by coughing and strident noise such as dishwashing or high-pitched voice of children. Neurologists opinion: migraine, anxiety disorder. The head CT scan was performed and showed SSCD. Complaints only increased further: headaches are steady, vertigo and nausea are constant. The patient hears the sound of her eye movements, which causes dizziness followed by vomiting. Disequilibrium is elicited by heavy lifting. By the end of the year symptoms worsen, autophony is more notable. Patient visits the doctor concerning fear of hearing loss in the other ear. Audiogram and VNG results are completely normal. At the moment the patient partially controls the onset of symptoms by avoiding triggers, but no longer wants to tolerate it, a decision of surgical intervention was made.

Conclusions: The management of SSCD ranges from symptomatic therapy with H1 receptor agonists, glucocorticosteroids, diuretics, antiemetics, anticonvulsants in patients with mild symptoms to surgical treatment in patients with disabling symptoms. Surgical management of SSCD began requiring a craniotomy but has now progressed to transmastoid and even endaural approaches. Though, there is not a uniform consensus both on the kind of surgical treatment and on the selection of patients who would benefit from a surgical intervention.

Summary: The case report demonstrates a 38-year-old woman with gradually developing symptoms caused by SSCD. Although the patient represents the typical course of disease, making the diagnosis based on clinical manifestations is time consuming due to the variability and steady onset of symptoms and inappropriate choice of radiological investigation method.

EFFICIENCY OF SURGICAL TREATMENT OF CHRONIC RHINITIS.

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Keywords: *surgical treatment of chronic rhinitis.*

Rhinitis is the most common of otolaryngologic diseases in Russia amounting to 50-60% of the total number of visits to ENT-specialists [1, 2].

In this article we would like to share our experience in minimally invasive surgery on the inferior nasal turbinates that we perform using video endoscopy under local anesthesia.

Research objective. Improving treatment outcome for patients with chronic rhinitis.

Materials and methods. 110 patients with this condition have been treated in the Otolaryngology Department of the medical center "Medservice" from February 2013 to March 2015, 62 of which were men and 48 were women. The average age was 35 years old. The most common reasons for surgeries were as follows: chronic rhinitis medicamentosa or hypertrophic rhinitis – 24 (number of patients), chronic vasomotor rhinitis – 45, perennial allergic rhinitis – 41.

Depending on the method of impact on the inferior turbinates, all the patients were divided into four groups as follows: Group 1 had submucosal vasotomy of the inferior turbinates (mechanical) – 25 patients; Group 2 had reduction of the inferior turbinates using a K.Storz microdebrider – 28 patients; Group 3 had radiofrequency reduction by Atmos RS 221 using a bayonet-shaped tip in continuous coagulation mode with 25 watt – 27 patients; Group 4 had laser reduction by Biolitec laser in pulse mode with 8 watt – 30 patients. Taking into the account the double-sided processes, the number of the operations equaled 220. The reasons for excluding someone from the analyzed groups comprised accompanying pathologies of the nasal cavity, namely nasal septum deformations and chronic polypoid rhinosinusitis.

It should be noted that all the operations were performed in a digital integrated operating room, and in all the cases the procedure was accompanied by bipolar coagulation of hypertrophic posterior ends or their resection and lateral conchopey of the inferior turbinates. The nasal cavity was packed non-tightly with 1-2 cotton wedges for 24 hours.

Mandatory requirements included video endoscopy control of the surgery, total absence of decongestants and careful cleaning of the nasal cavity by an suction machine as part of postoperative care.

Treatment efficiency evaluation criteria included complaints and the general condition of the patient, the time of recovery of nasal breathing according to a visual analogue scale (10 points), post-operative endoscopy results and computerized rhinomanometry. Clinical and functional tests were made on day 10 and 6 weeks after the surgery.

Results. Ten days after the operation, according to the visual analogue scale, nasal breathing was improved in all the groups (5 ± 2 points), and according to the endoscopic examination of the nasal cavity, edema of the mucosa was minimal in the group of patients who had undergone laser or shaver reduction of the inferior turbinates. Based on computerized rhinomanometry, statistically valid differences can already be traced in the early postoperative period. For patients after mechanical vasotomy of the inferior turbinates, the flow of inhaled air at resistance of 150 Pa was 302 ± 15 ml/s for each nostril, while the total flow through both nostrils was 617 ± 15 ml/s, which is on average 35 ml/s less than in laser reduction of the inferior turbinates and 30 ml/s less than in shaver vasotomy.

According to subjective and objective evaluations, six weeks after the surgery the symptoms were far less significant in all the groups if compared to the parameters before the

surgery. Comparative evaluation of the treatment efficiency based on the patients' complaints, nasal breathing scale and endoscopic examination did not reveal significant differences. However when it comes to computerized rhinomanometry, it is conclusive among Groups 1, 2 and 3 that the best result was achieved with shaver reduction of the inferior turbinates, where the total air flow through both nostrils reached the values for normal breathing – 723 ± 10 ml/s ($N > 700$ ml/s). If we compare all the methods of impact on the inferior turbinates, the best values are achieved with laser vasotomy with the inhaled air flow of 380 ± 17 ml/s through each nostril and the total flow of 768 ± 8 ml/s at resistance of 150 Pa.

Conclusions. Using video endoscopy assistance is a mandatory condition of the advanced approach to the treatment of this sort of patients. The most efficient surgical method in treatment of chronic rhinitis in our study is laser vasotomy of the inferior turbinates.

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THE AUDITORY FUNCTION OF NEONATES IN INTENSIVE CARE UNITS WHO FAILED THE FIRST STAGE OF HEARING SCREENING

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Keywords: *neonatal intensive care unit, newborn hearing screening, hearing loss, sensorineural hearing loss, otoacoustic emissions.*

Early screening for hearing loss is currently recognized as an international healthcare standard. Over the last decades important advances have occurred in the available technology for early detection and assessment of hearing impairment. The purpose of this study was to identify the causes of otoacoustic emissions (OAE) absence during the first step of hearing screening. Overall, 1012 infants aged between two days and 4 months participated in study. 116 (11%) of 1012 infants failed the OAEs at the first step of screening. 102 of them underwent a diagnostic assessment: 46 had normal hearing, 44 had conductive or mixed hearing loss, 12 had sensorineural hearing loss.

Introduction: The widespread introduction of universal newborn hearing screening (UNHS) significantly increased the early incidence of congenital hearing impairment, which makes 1-3 cases per 1000 births. It has shown that about 5% of newborns failed otoacoustic emissions testing in maternity hospitals even if newborn screening had properly organized. Thus, most cases of otoacoustic emissions absence during the first days of life are false-positive, related to paraphysiological conditions of the middle ear of neonates (presence of amniotic fluid, myxoid tissue in the tympanic cavity). The number of risk factors which could affect auditory function significantly increases in neonatal intensive care unit (NICU) as compared to maternity hospitals. These factors contribute to an increase not only of sensorineural hearing loss (SNHL) but also the Eustachian tube dysfunction and appearance of middle ear fluid.

Objectives: to identify the causes of OAEs absence during the first step of hearing screening and analyze the factors associated with it.

Patients and methods: 1012 infants aged between two days and 4 months were involved in the study (455 in 2014; 557 in 2015). They all received treatment in the NICU of Saint-Petersburg State Pediatric Medical University. For all of them a comprehensive medical and family history were collected and an analysis of risk factors for hearing loss (prematurity, central nervous system disorders, hyperbilirubinemia, exposure to ototoxic medications, syndromes associated with hearing loss, multiple congenital malformations, mechanical

ventilation, craniofacial anomalies, in utero infection and so on) was conducted. Newborns who failed OAEs testing were evaluated by means of high-frequency impedancemetry, click-evoked auditory brainstem responses (ABR) test.

Results: 116 (11%) newborns failed OAEs in the first step of hearing screening. 102 of them underwent a diagnostic assessment: 46 had normal hearing, 56 were identified with hearing loss. Among hearing impaired infants: 44 had conductive or mixed hearing loss, 12 had SNHL (2 cases of mild SNHL, 4 moderate, 1 moderate severe, 4 profound, 1 auditory neuropathy). A child with auditory neuropathy had a high-amplitude cochlear microphonic potential, no click-ABR, no OAEs. The absence of OAEs was explained by the presence of middle ear fluid.

Conclusions: At this study a higher incidence of children both with SNHL and with the middle ear dysfunction in NICU has been showed in comparison with maternity hospitals. High incidence of middle ear fluid can be explained by long-term using of mechanical ventilation, craniofacial anomalies, tube feeding. Identified auditory neuropathy indicates a necessity to perform newborn screening in NICU by means of automated ABR.

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OPTICAL COHERENCE TOMOGRAPHY IN THE DIAGNOSIS OF OTITIS MEDIA WITH EFFUSION

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Keywords: *otitis media with effusion, optical coherence tomography*

Importance. Visual methods of diagnosis of otitis media with effusion (OME) are subjective, depending on the characteristics of visual perception of the researcher and quality of the equipment. Objective diagnostic methods of OME are pure-tone threshold audiometry and impedancemetry. Conductive or mixed hearing loss can be detected by audiogram. B-type of tympanometric curve and reducing stapedia reflexes can be detected by impedancemetry. These methods have a high level of accuracy and specificity, however, require the involvement of qualified professionals and use of expensive equipment.

Objective. To research the possibilities of optical coherence tomography (OCT) in the diagnosis of the OME.

Materials and methods. The research was undertaken in the ENT-department of Volga District Medical Centre. The study involved 53 patients who were divided into 2 groups: group № 1 - patients without hearing loss (24 patients), group № 2 - patients with a confirmed diagnosis of OME. The study was undertaken in a dressing room under the control of the microscope without anesthesia.

Results. In patients from the 1st group were found identical optical properties of the medium in the external auditory meatus and the tympanum. In patients from the 2nd group in all cases was detected signal amplification away from medium in tympanic cavity and a significant difference of the optical properties away from the medium of the external auditory canal.

Conclusion. Determination of effusion in the tympanic cavity is possible due to the different optical properties of the liquid and gaseous medium. Appliance of the OCT allows noninvasively, in the outpatient settings without using of expensive equipment and skilled professionals to objectively confirm the presence of the effusion in the tympanic cavity.

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LONG-TERM RESULTS OF OPEN TECHNIQUE CHOLESTEATOMA SURGERY WITH OBLITERATION OF PARATYMPANIC SPACES.

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Keywords: *cholesteatoma, surgical treatment, obliteration of paratympanic spaces.*

The results of the postoperative observation of 229 patients during the period from 2009 till 2015 are presented. The follow-up observation revealed 12 cases of residual cholesteatoma; no relapse of chronic suppurative was documented.

Introduction:

Presently there are two main techniques for cholesteatoma surgery: the closed technique (wall up) and the open technique (wall down). The canal wall down mastoidectomy in cholesteatoma can secure a good operation field and easy removal of the lesion. However, there are some problems: these are the lifelong care of the cavity, dizziness due to the exposed semicircular canal, difficulty with the fitting of a hearing aid as well as poor cosmetics. The canal wall up technique has a better hygienic status and better functional outcome. This technique is associated with a higher rate of residual disease and a higher rate of recurrent disease. To prevent both residual and recurrent cholesteatoma, we performed canal wall down technique with the obliteration of paratympanic spaces for patients with acquired cholesteatoma.

Material and Methods:

We have been following up patients for some years and then analyzed the results about residual and recurrence of cholesteatoma. 229 ears were operated (223 patients: 81 females and 142 males). In 158 cases an operation was performed for the first time and 71 cases were revision and re-operation after surgery by other surgeons. All patients underwent sanitation surgery with the obliteration of paratympanic spaces followed by the restoration of the posterior wall of the external auditory meatus and simultaneous tympanoplasty. Close tympanic cavity with chondro-perichondrial flap with simultaneous ossiculoplasty. Obliterate paratympanic spaces with bone pate, or bioglass, or allocartilage and cover it with chondroperichondrial flap. The patients were examined one year after the treatment with the use of the MRI technology using the non-EPI DWI regime to monitor the residual and recurrence cholesteatoma. The high intensive signal in regime T2 and non-EPI DWI and the low intensive signal in standard regime T1 show the presence of cholesteatoma.

Results:

From 2009 to 2015, we operated 229 ears. The results were evaluated according to otomicroscopy, MRI sequences, such as the non-EPI DWI and recorded for survey. From 2009 to 2011 the residue of cholesteatoma was diagnosed in 3 cases (3,7%), from 2009 to 2012 – 7 cases (5.9%), from 2009 to 2013 – 9 cases (6%), from 2009 to 2014 – 11 cases (5,8%) and from 2009 to 2015 – 12 cases (5,2%). No residual cholesteatoma were detected in the obliterated mastoid cavity.

Conclusion:

Long-term follow up indicated that the canal wall down technique with bony obliteration is a safe method with which to treat primary cases and to reconstruct unstable cavities. The MRI technology in the non-EPI DWI regime was successful in differentiating soft tissues and enabling the detection of residual or recurrent cholesteatoma after a canal wall down bony obliteration technique procedure.

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NASAL CYTOLOGY IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE

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Abstract. This paper demonstrates the impact of gastro - esophageal reflux in the appearance of ENT pathology.

Nasal cytology study in 20 patients with gastroesophageal reflux disease is presented.

Analyzing the results of the study reveals the inflammatory changes in the study group.

Key words: gastroesophageal reflux disease, nasal cytology.

Introduction. At the moment the impact of reflux syndrome for the appearance of nose diseases is still a debate. A gastroesophageal reflux causes a damage to the nasal mucociliary clearance. It results in the development of inflammation in the nasal cavity and paranasal sinuses. There is no available data of the nasal cytology in patients suffering from gastroesophageal reflux disease not found.

Purpose. The study of nasal cytology in patients with gastroesophageal reflux disease (GERD).

Materials and methods. The study population comprised 20 adults aged 29 to 71 (average age 49,0 years) with gastroesophageal reflux disease. These subjects did not have any upper respiratory diseases (such as common cold, rhinosinusitis polyposa), allergic diseases and pregnancy. In 15% of cases GERD has been associated with lower esophageal sphincter incompetence, in 40% of cases – with lower esophageal sphincter incompetence and hiatus hernia and in 45% patients had complications (reflux oesophagitis, Barrett's oesophagus, oesophageal cancer). Six subjects were patients with related hypopharynx pathology such as chronic laryngitis, laryngeal papillomatosis and laryngeal granuloma. The study of nasal secretion was studied by smears from the nasal mucosa.

Results. In the study group absolute white blood cells count is more than in the control group ($p < 0.05$). In first group we observed an increase of the neutrophils count (average value was 40,3 ($p < 0.05$)). In 100% of patients in the study group, the eosinophils count was significantly higher than that in the control group (average value is 11,1 and 2,6 accordingly ($p < 0.05$)). The ratio of eosinophils count to neutrophils count was 1/4 (normal ratio is 1/6), indicating that there is eosinophilia of nasal secretions. According to the complete blood count in the study group and the control group, the differences between the eosinophils count (average value is 2,8 and 3,6) and leukocytes count ($6,6 \pm 1,0 * 10^9 / L$ and $7,50 \pm 0,41 * 10^9 / L$) has been identified.

In assessing exposure between the values of blood eosinophilia and eosinophilia nasal secretions revealed the presence of a moderate positive correlation relationship (the Pearson correlation coefficient was 0.44). Thus, the level of blood eosinophilia is not possible to conduct an accurate assessment of the eosinophilia of nasal secretions.

Conclusions.

1. Patients with gastroesophageal reflux disease have an increased the neutrophilic leukocyte count in the nasal cytology, that evidence a significant inflammatory reaction in the nasal cavity.

2. There is an increase in the eosinophils count in the nasal secretions in the absence of changes in the complete blood count.

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PATULOUS EUSTACHIAN TUBE: DIAGNOSIS AND TREATMENT.

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Keywords: *patulous eustachian tube, endoscopy, injection technic*

A patulous eustachian tube is associated with different reasons. The most informative diagnostic methods are - nasal endoscopy with rigid endoscopes 30°, 70° and fiber endoscopes; as well as the use of computed tomography, allowing detail to evaluate the anatomy of the eustachian tube. As before, there is no single approach to the treatment of the patulous eustachian tube, it is individual in each case.

The eustachian tube connects the middle ear cavity with the cavity of the pharynx. In the pharyngeal orifice of the eustachian tube mucosa has the greatest thickness, there are well developed submucosal tissue. The elasticity of the cartilage of the eustachian tube, mucosa, soft palate muscles, as well as peritubal adipose tissue provides support for the orifice of the eustachian tube. The eustachian tube is normally closed, but it opens swallowing or yawning for only less than one second to equalize the middle ear pressure with the atmospheric pressure, and immediately close again.

In 1867 Jago (Toynbee's disciple) further characterized the patulous eustachian tube after reporting that he himself was afflicted with this condition.

A patulous eustachian tube is associated with mucosal atrophy (that due to atrophic rhinitis or occurring after radiotherapy), muscular dysfunction; some neurological diseases – such as poliomyelitis, multiple sclerosis, rapid and significant reduction in weight, in particular in bariatric surgery, anorexia nervosa; hormonal changes or other factors.

Diagnosis of such pathological condition is often a difficult objective. Patients experience aural fullness, tinnitus and autophony. However, patients hear their own breath sounds. The sound is synchronous with nasal respiration.

PET is benign, but it can have a significant negative impact on a patient's quality of life. Instrumental diagnostic methods are an important component in the verification of the diagnosis. The key method of diagnosis PET is nasal endoscopy - the concave longitudinal defect is seen over the anterolateral wall of the tubal valve.

Otoscopy revealed movements of the eardrum coincident with regular or forced nasal. Often patulous eustachian tube is combined with atrophic changes of the eardrum. The tympanometry may also indicate the eardrum hypermobility.

Three-dimensional computed tomography shows the anatomy of the eustachian tube and its surrounding tissues.

Completely open the eustachian tube from the pharynx to the tympanum observed at CT in 80% of patients with PET, while this does not occur in healthy individuals.

The patulous eustachian tube presents a challenging management problem. Most patients require no treatment other than consolation. The symptoms are often transient, and a careful explanation of the condition is all that is needed. Conservative intervention included nasal instillation of saline, the local use of Premarin nasal spray, insufflations of boric acid and salicylate powder into the eustachian tube orifice. A variety of nonsurgical treatments have been described with only temporary effectiveness.

One of the first surgical management options for patulous eustachian tube was myringotomy with ventilation tube placement. It is fairly simple to perform. However, this manipulation may provide symptom relief with a 50% success rate.

Injection techniques have been used widely. The idea was originally proposed by

Zöllner in 1937, he used a paraffin. Currently used in the introduction torus tubarius autologous material, in particular the fat graft. Just use artificial biocompatible materials - infusion of absorbable gelatin sponge solution, hyaluronic acid, calcium hydroxyapatite. Injection techniques are performed under transnasal endoscopic control, and are minimally invasive.

The techniques which lead to scar formation, and as a consequence to the stenosis in the eustachian tube orifice or lumen. These include the use of phenol, silver nitrate and electrocauterization.

In order to change the eustachian tube lumen are used various options ligation of the eustachian tube orifice; laser tuboplasty; tubal reconstruction with autologous cartilage; human acellular dermis implantation and the curvature inversion technique.

It should be noted that recently used a combination of several options PET treatment to achieve maximum efficiency.

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CONE BEAM COMPUTED TOMOGRAPHY FOR DAIGNOSTICS AND TREATMENT PLANNING OF PATIENS WITH PATHOLOGY OF THE LACRIMAL DRAINAGE SYSTEM.

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Keywords: cone beam computer tomography (CBCT), contrast agent, lacrimal drainage system (LDS), endoscopic laser dacryocystorhinostomy (DCR).

Introduction. There are lots of methods to diagnose abnormalities of lacrimal drainage. Instrumental methods in ophthalmology include: colour lacrimonasal, a tubular, washing tests. In addition there are X-ray diagnostic techniques such as standard radiography with artificial tear duct contrasting and multislice computed tomography.

In connection with the improvement of diagnostic X-ray methods the question is of optimal x-ray examination that responds the requirements of the large informative content with minimal radiation exposure. Thus, the following radiation method of diagnosis: cone-beam computed tomography (CBCT) of the paranasal sinuses (PNS) with simultaneous contrast enhancement into the lacrimal drainage system (LDS) is suggested in this study.

Object. To develop a combined method of CBCT with simultaneous introduction of contrast agent into the lacrimal drainage system and the algorithm of evaluation of the obtained results. To determine the diagnostic sensitivity and specificity of this method of research.

Materials and methods. At the otorhinolaryngological clinic of the First Pavlov State Medical University of St.-Petersburg 53 CBCT images of the patients complaining of lacrimation with suspected pathology of LDS were analyzed and compared since 2014 till February 2016. 9 of them were men and 44 women aged 21 to 80.

A retrospective analysis of 53 tomograms of the PNS was performed while assessing the lacrimal drainage system in patients with disorders of lacrimal drainage. The research was carried out on the computer tomograph scanner Galileos Comfort (Sirona Dental Systems Gmb H, Bensheim Germany), software Galaxis. The tomography parameters: 85 kV, 4mA, 28mA/s, an isotropic voxel size of 0.15 mm, the effective dose 70мкЗв. Viewed Windows volume is 15 cm³. Positioning before shooting was carried out on orbitomeatal line. Tomograms were analyzed in the "MPR/radiology research" in 3 dimensions.

Analysis of 36 case histories was realized at the otorhinolaryngological clinic of the First Pavlov state medical University of Saint Petersburg. And the patients were undergone endonasal endoscopic laser dacryocystorhinostomy.

Selected images were divided into 2 groups depending on the presence or absence of anatomical changes of architectonics in the nasal cavity.

Inclusion criteria in group:

Group I – anatomical norm of architectonics in the nasal cavity and paranasal sinuses (10 persons).

Group II – anatomical abnormalities of structures in the nasal cavity and paranasal sinuses (43 persons):

1) deviation of the nasal septum (16 persons);

a) S-shaped deviation - 5 persons; b) C-shaped deviation - 3 persons;

c) septum crest of the nasal cavity - 6 persons;

- d) swell-body - 2 persons;
- 2) hypertrophy of the inferior turbinates - 6 persons;
- 3) concha bullosa - 4 people;
- 4) Associated changes of anatomical structures of nasal cavity with reactive changes in the paranasal sinuses (rhinogenic maxillary cysts, acute sinusitis, chronic parietal hyperplastic maxillary sinusitis, structural changes of ostiomeatal complex) – 17 persons. Among these changes the deviation of the septum of the nasal cavity with hypertrophy of the inferior turbinates, and also the deviation of the nasal septum with a concha bullosa were dominated.

Qualitative and quantitative assessment of the nasal cavity structures, paranasal sinuses and the lacrimal drainage system was produced.

Results. Algorithm of the tomograms' evaluation included qualitative and quantitative research methods of the LDS, the nasal cavity and the paranasal sinuses of the anatomical structures.

Qualitative methods:

- 1) determination of the presence of contrast in the lacrimal tract (the lacrimal canaliculi, lacrimal sac, nasolacrimal canal);
- 2) assessment of localization of the nasal septum (possible deviations);
- 3) assessment of condition of the lower turbinates (possible hypertrophy);
- 4) assessment of structure of the middle turbinate (possible concha bullosa);
- 5) assessment of condition of PNS (reactive changes such as cystlike parietal hyperplastic changes in the mucous membrane of the sinuses, exudate in the sinuses).

Quantitative methods:

- 1) if being contrasted, the length, width and height of lacrimal sac are determined;
- 2) width measurement of the bony part of the nasolacrimal canals (upper and lower borders);
- 3) length measurement of the bony part of the nasolacrimal canals (anterior and posterior walls) in the sagittal dimension;
- 4) determination of the angle between the inferior turbinate and the lateral wall of the nasal cavity;
- 5) determining a distance between Hasner's valve and the front ending of the inferior turbinate (in sagittal determined);
- 6) measurement the distance between the nasal septum and the bony part of the medial wall of the nasolacrimal duct on the both sides in the upper, middle and lower thirds of the nasolacrimal duct.

Thanks to the findings of qualitative and quantitative methods the levels of LDS stenosis, peculiarities of the lacrimal sac's walls of the nasolacrimal duct structures, as well as the influence of anatomical structures of the nasal cavity and the PNS on the development of this pathological process in the LDS identify .

On the basis received results 36 patients were undergone of the endoscopic laser DCR and 17 patients were undergone conservative treatment.

Conclusions. 1) Designed a combined methodology of performing CBCT with simultaneous contrast introduction into the lacrimal drainage system and the algorithm of analysis of the obtained results. 2) Cone-beam computed tomography of the paranasal sinuses with simultaneous contrast enhancement of the lacrimal drainage system is a economically profitable, high informative method of radiation diagnostics with low radiation-absorbed dose. As a result the possibility of performing a series of repeated examinations of patients with pathology lacrimal apparatus (diagnostic sensitivity was 97 %, specificity 83%).

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SECONDARY HEMORRHAGE AFTER TONSILLECTOMY: MAIN REASONS AND PREDISPOSING FACTORS.

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An analysis of the main causes of secondary bleeding after tonsillectomy was performed. Temperature response in the postoperative period, the phase of the menstrual cycle are risk factors for the development of secondary hemorrhage.

Keywords: tonsillectomy, bleeding.

Objective: An analysis of the causes of bleeding in the postoperative period after tonsillectomy in Otorhinolaryngology clinic of the First Pavlov State Medical University of Saint Petersburg in 2015.

Material and methods: A retrospective analysis of patients data and cases of bleeding after tonsillectomy in Pavlov First Saint Petersburg State Medical University in 2015. Such factors as a gender, age, peritonsillar abscess in anamnesis, the phase of the menstrual cycle, a method of anesthesia, the method of intraoperative hemostasis (bipolar or monopolar radiofrequency cauter), febrile fever up to 5 days have been discussed . Tonsillectomy in all cases was extracapsular. All patients were treated with antibiotics (parenteral cephalosporins).

Generally, 110 tonsillectomy were performed in 2015, 38 patients- men (34.5%) and 72 (65.5%)- women. No one suffered from blood diseases and hemostatic disorders. The age group from 18 to 25 years old included 31 people- 28.2%, from 26 to 35 years- 57 people (51.8%), from 36 to 44 years old- 16 people (14.5%), middle-aged group included 6 people - 5.5%. 7.3% of patients had a peritonsillar abscess in anamnesis. There wasn't cases with intraoperative vascular ligation.

Monopolar cauter was used for hemostasis In 7.3% of cases, in other cases - bipolar. Steroid therapy has not been used, the NSAIDs therapy was used on demand.

Results: Only in six cases out of 110 (5.45%) there was bleeding, which led to a re-hospitalization in the 6, 9, 12, 15 and 21 day. In five cases, bleeding has been stopped with drugs (aminocaproic acid, Dicynonum, calcium gluconate, vitamin C,) in one case- surgically. In this study all 6 patients with secondary bleeding were younger than 25.

In five cases, the patients had no concomitant somatic pathology. One patient treated with hemodialysis due to chronic kidney disease was bleeding on day 21 after tonsillectomy. Hemorrhage was stopped with drugs. The severe pathology of kidney and regular using of heparin during hemodialysis was the reason for secondary bleeding in this patient.

In this group of patients only one case had a peritonsillar abscess in anamnesis.

A significant difference in the incidence of secondary bleeding in women and men was not revealed. However, the period of fibrinous clot discharge coincided with the menstrual cycle in two of three women with secondary bleeding.

All patients with secondary bleeding were operated under general anesthesia.

In one case there was a diet and behavior violation after tonsillectomy, which could be the cause of bleeding.

In one case, patient fell ill with influenza on the 9th day after the operation. Diapedetic bleeding started due to fever and cough.

In half of cases there was a febrile fever up to 5 days in the postoperative period despite of antibiotics treatment. In all these cases, bleeding started in the later stages, on 12,

15 and 21 days after the operation. This fact does not exclude the role of infection in the development of bleeding.

The results of this analysis due to small number of patients with secondary bleeding should not be absolute. More research is required, nevertheless some conclusions about the predisposing factors for secondary bleeding was done.

Conclusions:

1. Age group from 45 years to 60 years old and gender are not important factors in secondary bleeding development . However, the young age is associated with the risk of diet and behavior violation and becomes an extra risk factor for secondary bleeding.

2. Febrile fever up to 5 days in the postoperative period should be considered as a risk factor of bleeding after tonsillectomy.

3. Tonsillectomy in women should be planned according to the menstrual cycle.

4. The risk of postoperative bleeding is not increased after tonsillectomy under local anesthesia.

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DIFFICULT CASES OF THE NOSE DEFORMATION, SURGICAL TACTICS.

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Correction combined deformation of the nose is a common problem in functional rhinoplasty. In addition to the aesthetic deformity it brings to the patient significant suffering in the absence of nasal breathing. The goal of surgical treatment of this patients is to improve nasal breathing and the beauty of the nose. Rhinoplasty open access in combination with the obligatory correction of intranasal structures with minimal resection of the tissue may be successfully applied in patients with combined nose deformation.

Keywords: *functional rhinoplasty, combined nose deformation.*

Deformation of the external nose and the associated functional respiratory disorders are a common reason for seeking patients to specialists dealing with the problems of functional rhinoplasty. Among them, the share of combined deformation is significant, and the tactics of its correction is highly variable. Correction of combined deformation of the nose is particularly difficult and associated with a large number of functional and aesthetic complications.

Objective. The aim of this work is to analyze the reasons for the unsatisfactory results of rhinoplasty and to develop the algorithm of surgical correction of the difficult nose combined deformation and improve postoperative functional and aesthetic results of rhinoplasty.

Subjects and methods. We have analyzed 31 patients operated on with combined nasal deformation in the bone and cartilage part of the nose. In all cases the nose deformation occurred as a result of trauma and accordingly the majority of the patients (27) complained on difficulty in nasal breathing. All patients underwent standard preoperative examination with obligatory computed tomography of the paranasal sinuses and photographing a person in standard projections. All operations were performed using controlled hypotension. The goal of surgical treatment was to improve or restore nasal breathing and the beauty of the nose. In the surgical treatment of combined deformation of the nose in order to improve postoperative functional and aesthetic result in all cases we used following surgical techniques:

- open rhinoplasty approach;
- correction of intranasal structures such as septoplasty, turbinate plasty, increase nasal valve angle using spreaderflaps and spreadergrafts;
- maximum reduction rhinoplasty resection, preferring suture techniques and different grafts
- with significant expression of the nose deformation we use full lateral and paramedial osteotomies, incomplete percutaneous osteotomies performed with less deformation.

Results. All clinical observations succeeded in improving the functional and aesthetic characteristics of the nose. Complications in the form of permanent deformation was observed in 3 cases, accounting for less than 10%.

Conclusion. Rhinoplasty open access in combination with the obligatory correction of intranasal structures with minimal resection of the tissue allows to achieve good functional results in functional rhinoplasty.

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PROPRANOLOL IN THE MANAGEMENT OF INFANT'S SUBGLOTTIC HEMANGIOMAS.

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Six children with subglottic hemangiomas were treated with propranolol from 2011 to 2016 in Saint-Petersburg State Pediatric Medical University. Propranolol was given at a dose 2mg/kg/day during 6-24 months. All children responded to medical therapy.

Keywords: *Propranolol, Subglottic hemangioma, Airway, Beta-blocker.*

Objectives: Earlier, treatment for subglottic hemangioma included systemic corticosteroids, intralesional steroids, tracheostomy, open surgical resection and endoscopic laser excision. But systemic corticosteroids may expose the child to the growth delay, Cushingoid changes, compromised immunity. Laser treatment achieves success rates but with a high rate of complications like subglottic stenosis. Propranolol hydrochloride is a nonselective beta-blocker. In 2008 the practical benefit of propranolol in the treatment of hemangiomas was observed in the New England Journal of Medicine in children, treated for unrelated hypertrophic cardiomyopathy, which showed fast regression of disease. This observation was the first step of using propranolol in the treatment of infantile hemangiomas worldwide. Treatment with propranolol has different adverse effects: bradycardia, hypotension, hypoglycemia, rash, gastrointestinal reflux, fatigue and bronchospasm. We would like to compare the advantages of using propranolol with adverse effects in our study.

Methods: We presented a retrospective study of infantile subglottic hemangiomas treated with propranolol at Saint-Petersburg State Pediatric Medical University.

Results: Six children were included from 2011 to 2016. Four of these six patients were female. The average age of presentation was 4 months, with a range of 2 - 12 months. All of them have a similar symptoms: stridor, airway obstruction, feeding difficulties. One of them presented with cutaneous infantile hemangioma. All of them were treated with propranolol. Two infants had tracheostomy, because of the life-threatening size of subglottic hemangioma. The drug was given at starting dose 1 mg/kg of body weight per day. All infants were observed by the cardiologist, pediatrician in the hospital during the week. Then the dose of propranolol was increased to 2mg/kg/day, on condition the child demonstrates acceptable electrocardiogram, blood pressure, heart rate. These children were monitored every three months during 6-24 months. This therapy was effective in all cases. One of the two patients was decannulated. No patient required surgical intervention. The reduction of respiratory symptomatology was noticeable in all cases. No side effects from propranolol occurred.

Conclusion: We consider that propranolol can be used as a first-line treatment in the management of infant's subglottic hemangiomas.

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PREIMPLANT SINUS SURGERY

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Keywords: *maxillary sinus, endoscopic sinus surgery, dental implantations, minimally invasive surgery, sinus floor elevation, sinus lift*

Problem actuality. The problem of bone atrophy in the region of maxillary sinus bottom is done before implantation by sinus floor elevation. Up to the opinion of some authors diseases of maxilla sinus and endonasal problems can be problematic for bone reconstruction of upper jaw. So Misch C.E. (2008) refers chronicle sinusitis to absolute contra-indications for sinus lift procedure. International team for implantology (ITI, 2011) believes sinusitis to be relative contra-indications for maxilla bone plasty. Modern endoscopic ways of maxillary sinuses and endonasal structures allow to clear off sinuses, provide nose breath and add to mucosal reconstruction. This makes it possible to fulfill sinus lift and dental implantation furthermore for patients with strong atrophy of alveolar process of upper jaw.

Research target. Improval of results of bone plasty surgery in cases of alveolar process atrophy of upper jaw through minimally invasive surgery of sinuses.

Materials and Methods. The group of grown-up patients with one-side or two-side defects of teeth rows and strong bone atrophy in this region were the focus of our research. Diagnosis process and treatment took place at University dental clinic and at ENT and maxillo-facial department of Saint-Petersburg railway hospital. Research has been fulfilled with the support of personal grant of professor E.Eichwald.

To make diagnosis all the patients were X-rayed with the cone-beam tomography of upper jaw and sinuses. In the cases of odontogenic infection the patient was sent to dental therapy and surgery. If the patient had nose breath disfunction and was in need of surgical correction of nose structures, we planned rinology stage. For non-invasive treatment we used complex of medicine for 1 month such as nasal sprays of saline, nasal decongestants and topical corticosteroids two or three times a day.

Endoscopic sinus surgery was the first stage of treatment in the case of alien body, x-ray signs of osteomeatal block, fungus ball.

In two months after sanitation we made X-ray control again. After we planned bone reconstruction and dental surgery. If we found out the mucosal changes of maxillary sinuses, we considered it as a recurrence and started the endoscopic sinus treatment again.

Conclusions. As a result of preimplant sinus surgery of 142 patients, all of them got orthopedic rehabilitation. 86 patients needed endoscopic sinus surgery, and 14 of them needed nose surgery at that. The recurrence of the mucosal process could be observed in 3 cases. It was caused by non-effective endodontic treatment of teeth close to sinus bottom. Only 60,5% (86 cases) of patients with sinus problems were need of surgical correction, but the rest of 39,5% (56 cases) of patients were prepared to bone reconstruction with the help of dental sanitation only.

Summing up, minimally invasive methods of sinus surgery allow to fulfill dental rehabilitation of patients with alveolar bone atrophy and pathology of maxillary sinuses and nasal cavity.

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THE DIFFERENTIAL DIAGNOSTICS OF INVERTED PAPILLOMAS OF SINO-NASAL LOCALIZATION

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Inverted papilloma refers to benign tumors of the nasal cavity and, according to some authors, forms from 0,4 to 4,7% of cases in relation to all tumors of the nasal cavity and paranasal sinuses. The majority of patents are men aged 50 - 60 years. The ratio of men and women is on average 4: 1 - 5: 1, which corresponds to the majority of researchers. Inverted papillomas are characterized by a high tendency to relapse (3 - 19%) and malignancy (from 5 to 10%).

One of the first theories of inverted papilloma of the nasal cavity was the theory of chronic mucosal irritation of the upper respiratory tract by various harmful factors (acute and chronic infections of the upper respiratory tract, purulent polyposis, occupational hazards). Also in the issue of the etiology number of authors points to a role of hormonal changes, metabolic disturbances and reduce the overall immunological reactivity of patients body. The presence of specific human papilloma virus is now considered as the main cause of the development of tumors.

Localization of inverted papillomas are very variable - the tumor can be located on the lateral wall of the nasal cavity in the middle turbinate and adjacent sinuses (maxillary sinuses and ethmoidal labyrinth cells), and on the nasal septum. Inverted papilloma remaining histologically benign tumor, in the clinical course is often manifested as malignant because it has degraded growth. It can destroy the bone structure and as a result of expansive growth sprout wall sinuses, orbit, skull, moving the anatomical structures and causing bleeding.

Clinically invertible papilloma remains asymptomatic for a long time. Most often, patients complain of difficulty in nasal breathing on the affected side. Gradual increase in nasal congestion, sanious discharge, nose bleedings, hypo- and anosmia, tearing, pain in the facial nerve on the affected side are the often complains of patients with inverted papillomas.

In the diagnosis of inverted papillomas key position is occupied by the radial method - computer and magnetic resonance tomography. Several authors have developed specific diagnostic algorithm for the verification of this nosology. The set of features includes: a unilateral violation of patency surround one of the nasal cavity halves combination of nonspecific signs of chronic polyposis, dislocation border structures on the pressure volume process in the nasal cavity, atrophy of the nasal structures on the pressure, the involvement of the residual bone fragments middle turbinate into the tumor mass. The value of CT - study is the ability to accurately assess the borders that allows you to determine the stage of the process and the tactics of the further management of the patient.

Sinus tumors are quite clearly visible on MRI sites mainly in the form of average or low signal intensity. Inverted papilloma are well detected on T 2 -weighted MR tomograms. This allows you to differentiate between active inflammation in the axils of the fibrous and scar-tissue changes that have a high or low signal intensity in all modes. The introduction of contrast agent increases the brightness of the inflamed mucosa. But the final diagnosis can be set only by the histological examination of the tumor. Morphologically tumor surface is covered by a thick epithelial layer which distinguish three zones. The basal area consists of small and dark cells. The intermediate zone is represented by large light cells, forming many layers. Finally, the most narrow and not always expressed zone consists of flattened cells with oxyphilous giperhromnoymi cytoplasm and nuclei. Moreover, papilloma epithelium forms a plurality of protuberances into the underlying connective tissue. Sometimes there are lymphoid follicles. There are no normal glands in the stroma.

In conclusion, the differential diagnostics of inverted papillomas should be held with lots of forms of pathology of sino-nasal localization according to CT and MRI. But the only method which can provide us to put the final diagnosis is the histological examination of the tumor.

TREATMENT STRATEGY OF AURICULAR KELOID SCARS

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The external ear represents a zone with a high risk of keloidal cicatrization. The incidence rate is connected with a huge popularity of piercing and the plastic operations on the outer ear. The keloid scars of the auricle in particular have the highest per cent of the relapse in 50–100% cases among the keloids situated at different sites of the human body. Obviously, poor effectiveness of the provided treatment is connected with the high degree of tension of skin at the auricle zone, the rarefied vascularization and the intimate application of skin to cartilage at this very zone. The problem of treatment of the keloid scars of the external ear is at the confluence of two disciplines, dermatology and otolaryngology. This leads to further research of the causal relationships between the peculiarities of the auricle structure and the pathophysiology of the keloid and, hence, to the search of new approaches and effective combinations of the treatment methods.

The objective of the work is the elaboration of the effective and safe complex method of treatment of the keloid scars of the auricle.

Materials and methods. The research includes both experimental and clinical parts.

Since 2012 to 2014 we had 3 male and female patients under our care with the keloid scars of the auricle in the age from 14 to 25.

All of them got the treatment due to the following scheme. At the preparatory phase with a goal of softening the scar we used injections with the Longidaza solution. The treatment started with 2 injections of the Longidaza solution for the purpose of softening the scar tissue in 3000 units.

On the expiry of 14 days with the purpose of destruction the scar we used the CO₂ laser in fractional mode what led to the significant shrinkage of the scar tissue.

The patients wore the silicone plaster dermatix for the prevention of the relapse between the laser destructions.

We have chosen the CO₂ laser with the possibility of the fractional impact for destruction because the fractional impact in particular is able to reach the maxim contraction of volume of the scar tissue with the minimum damage as its chromatophore (the target tissue) is water.

We have selected the power of impact from 25 to 30 Watt with a pace of 5 Watt.

Results. Taking into consideration the fact that any trauma is the starting moment for the keloid scar, then the laser impact is also able to provoke the cicatrization what we observed in early period after the laser usage where all 5 symptoms were shown. The foremost complaint was the pain against the reactive oedema and the hyperemia.

However, against the complex treatment the clinical picture has changed step-by-step: after the first session the volume of the scar tissue was reduced in two times.

In a month the second session took place after which we observed the significant flattening of the scar. The third session led to the achievement of more visible result in the smoothing of the relief. And the forth and the fifth sessions led to the final destruction of the scar tissue.

Conclusions. The most effective is the complex treatment of the keloid of the auricle including both the destruction methods and the anti-relapsing therapy.

It is necessary to accompany the laser destruction of the keloid scar of the auricle with the appointment of the nonsteroid anti-inflammatory drugs in order to block the main pathogenic factor, i.e. inflammation.

The proposed by us protocol of the conduct of the keloid of the auricle containing the laser and the enzymatic destruction of the scar tissue against the anti-inflammatory therapy in cooperation with the usage of the silicone plaster is an effective way of treatment and it can be recommended for the clinical usage.

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HOW DOES THE ORGAN OF CORTI CELL ORGANIZATION IMPROVES SOUND PERCEPTION?

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Sound vibrations are collected from the external environment by the eardrum and are guided to the basilar membrane in the inner ear. When a complex sound, such as music, is heard, each frequency excites the basilar membrane at a specific place. The tiny (atomic dimensions) displacements of the basilar membrane are detected by thousands of hair cells, embedded in the organ of Corti situated along this membrane, and sent to the brain for interpretation. Some of these hair cells work as microscopic motors, yielding a pre-amplification of the sound and an exaggerated, complex basilar membrane motion. As a result of this outer hair cell activity, oto-acoustic emissions are also produced. Nevertheless, it still remains to be understood how thousands of hair cells work together, giving mammalian ears their exquisite properties.

In this presentation I will present our contribution in answering this question. First a novel imaging approach, with less artifacts than standard techniques, was used to acquire the cell organization within the organ of Corti of the mouse. Genetically engineered mTmG mice, which have a fluorophore embedded in the cell membranes, were used to avoid fixation and staining. As a result, a precise 3D representation of the highly structured cells within the organ of Corti was obtained.

This 3D representation nicely shows the well-known radial organization of the organ of Corti (3 rows of outer hair cells, tunnel of Corti, 1 row of inner hair cells). Moreover, it also shows that the cells are highly organized in the longitudinal direction. An interesting feature is a Y-shaped building block, formed by outer hair cell, Deiter cell and phalangeal process. Our hypothesis is that these Y-shaped structures help in the sharp amplification of the traveling wave and give mammals exquisite hearing. In order to test this, a computer model was made. The model with Y-shaped building blocks included, shows very good agreement with experiments and support the idea of the importance of this Y-shaped organization.

CLINICAL FEATURES OF SPHENOID SINUSITIS.

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Key words: *sphenoid sinusitis; endoscopic surgery, fungal ball*

Sphenoiditis - is an inflammation of the mucous membrane of the sphenoid sinus. Isolated pathology of this sinus is rare, and, according to the literature, is 1-3% of all diseases of the paranasal sinuses. Sphenoid sinus disease is rare and probably difficult to diagnose

Because of nonspecific symptoms the diagnosis is often made during the operation or postoperatively. The presenting symptom is usually a headache, which could not be stopped even by using analgesic medicine. In addition, patients complain of vision problems, nosebleeding, etc. There are many approaches to the treatment of sphenoid sinus disease, among them we prefer endoscopic endonasal type.

Purpose of the study: to determine the number of isolated sphenoiditis among all diseases of the paranasal sinuses; identify types of pathology in the sphenoid sinus; compare the pathology in sphenoid sinus with patients complaints; evaluate the results of endoscopic endonasal approach as a method of treatment.

Materials and methods: Retrospective study of medical documentation of patients from 2010 to 2015 at the ENT Department. History, symptoms, endoscopic examination of the nasal cavity and CT examinations were analysed. Approach to the sinus was performed using endoscopic technique. At the same time a correction of adjacent structure was made if it was necessary. All surgery was performed with general anaesthesia. Using endoscopy the result of transnasal approach was estimated. Under 0° endoscopic guidance the natural ostium of the sphenoid sinus was identified and then enlarged. Pathology detected in the sinus was compared with patient's complaints.

Results: During the period from 2010 to 2015 more than 1500 endoscopic operations on the paranasal sinuses were carried out. Among them, the sphenoid sinus isolated lesion was observed in 15 cases (1%). The most common fungal ball in the sinus cavity was detected. The most number of patients with this disease complained of headache. CT scans help to study the anatomy of the sphenoid sinus and plan the surgical approach. Endoscopic endonasal sphenotomy has become the most preferable choice of surgeons in treatment of lesions of the sphenoid sinus, with minimal damage, lower incidence of complications, and lower morbidity and mortality rates compared with traditional approaches.

In the distant postoperative period the function of the new ostium drainage and the content of the sinus was studied using endoscopic technique.

Conclusions: The estimates made by colleagues of our Department are similar to information received from the world's literature pointed that isolated lesion of the sphenoid sinus is rare. The fungus ball was the most common pathology between all chronic sphenoid sinus diseases. The fungal ball pathology causes headache in patients. The normal drainage function points to the preference of endonasal access in surgical treatment. We can predict certain pathology in the sphenoid sinus based on definite complaints of the patients.

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INFLUENCE OF ANTIOXIDANT INHALATION THERAPY ON A COURSE OF EXPERIMENTAL ACUTE MAXILLARY RHINOSINUSITIS.

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The processes of free radical lipid peroxidation in blood and maxillary sinus washings have been studied by assessing the levels of thiobarbituric acid (TBA) reactive substances and superoxide dismutase (SOD) activity in the settings of experimental acute purulent maxillary sinusitis to provide a rationale for the use of Enoant for endonasal inhalation therapy.

Keywords: acute sinusitis, treatment, inhalation, antioxidant activity.

It has been determined that in the settings of acute purulent sinusitis local disorders are mostly observed in the antioxidant activity rather than in the peripheral blood. After 10 days of treatment with endonasal Enoant inhalations the studied parameters of free radical lipid peroxidation returned back to normal.

At this point there are no doubts that treatment of patients with inflammatory upper respiratory tract diseases should be complex and staged. An important role in the system of staged treatment belongs to physical factors which successful use is possible due to a differential approach used for each form of the disease. It is known that activation of lipid peroxidation takes place in case of decreased organism reactivity. The weakening of antioxidant protection causes an overflow of peroxide compounds, activation of lysosomal hydrolases and decrease in peroxidase enzyme activity. In acute inflammatory diseases these processes violate the function of paranasal sinuses mucosa cells which manifests in destruction of cellular membranes, changes of their permeability, and, as a result, the mucociliary function and ciliated epithelium became compromised.

The objective of this study was to investigate the processes of free radical lipid peroxidation in the settings of experimental acute purulent maxillary sinusitis in rabbits to provide rationale for the use of Enoant for endonasal inhalation therapy.

Materials and methods: Enoant is a food concentrate which contains polyphenols of Cabernet Sauvignon grape in bioavailable dissolved form; it has complex biological antioxidant, antibacterial and antiviral activity. Parameters of the lipid peroxidation processes were monitored over time during the conduction of Enoant inhalation treatment course in maxillary sinus washings and peripheral blood obtained from the marginal ear vein of experimental animals. The state of lipid peroxidation processes was assessed by detecting TBA reactive substances and SOD activity in hemolysate and nasal sinuses washings. The protein content in the nasal sinuses washings was measured by microbiuretic assay.

Results and discussion: As a result of the conducted study a 48.1% increase ($p < 0.05$) in the content of TBA reactive substances was detected in hemolysate and a 26.63% ($p > 0.5$) increase – in the nasal sinuses washings as compared to the control group; a 67.86% ($p < 0.001$) decrease of SOD enzyme activity was registered in hemolysate and a 42.94% ($p > 0.5$) decrease – in the nasal sinuses washings as compared to the control group. A clinical improvement and normalization of TBA and SOD levels were observed after a conducted course of Enoant inhalations (0.3 ml/kg in 5 ml of distilled water, 10 procedures lasting 10 minutes each, daily). At the end of treatment the normalization of peripheral blood parameters was more pronounced.

Conclusions:

1. Acute inflammation in paranasal sinuses is accompanied by impaired free radical lipid peroxidation in the regional blood flow and paranasal sinuses washings. Therefore, it is advisable to correct the lipid peroxidation system in sinusitis.

2. The antioxidant inhalation therapy contributes to normalization of free radical lipid peroxidation processes.

3. Inhalation method of the drug delivery is highly effective in treatment of acute sinusitis.

4. Food concentrate Enoant has a marked antioxidant effect and can be used in the complex treatment of acute inflammatory diseases of paranasal sinuses.

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INVESTIGATION OF THE RELATIONSHIP BETWEEN TUMOR SIZE AND ABR VARIABLES

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Acoustic neuromas comprise about 6% of all intracranial tumors, about 30% of brainstem tumors, and about 85% of tumors in the region of the cerebellopontine angle (Barbara Jamróz, 2013). The most useful and accurate audiological test for acoustic neuromas remains the auditory brainstem response (ABR). The prerequisite for this test is hearing function sufficient to generate an adequate ABR.

The **aim** of this study was investigate the relationship between tumor size and ABR variables.

Materials and methods. This article was based on analyze of the clinical data of 97 patients with acoustic neuroma confirmed by MRI. They was treated and observed on the Clinic of Otolaryngology Warsaw National Medical University from 2010-2014. We divided patients in to the 3 groups depending on the stage of the tumor. In this study was used the classification of Koos'a and Perneczky. Among them: 1 group (44 patients) - I stadium; 2 group (35 patients) – II stadium; 3 group (18 patients) – III stadium. The latencies of wave V and interval I-V and III-V were evaluated. Audio Evoked Potential Tester (EPTest, Pracownia Elektroniki Medycznej, Warsaw) was used to measure the latencies of different ABR components. Recordings were performed with rectangular electric clicks via an insert earphone (int. 90 dB; frequency rate 11.0/27.0/s; sweep, dur. 100.0 uj; t. 37.00 ms) with a digital low filter at 2000 Hz and a digital high filter at 200 Hz. The ABR was recorded with a one-channel system. The ABR responses of groups of patients were retrospectively considered and compared.

Results. Patients of the first group comprised of 44 patients with unilateral or prevalently unilateral sensorineural hearing loss. The mean pure tone threshold at this group was 36,9 ($\pm 19,7$) dB. As a result of ABR, it was noted that 18 cases (40,91%) waves were not detected. Wave V was recorded in 24 cases (54,55%). Only in 12 (27,27%) cases ABR were positive and demonstrate sensitivity for retrocochlear pathology. Of these, the average latency of wave V were 5,81 ($\pm 0,65$) ms, interval III-V were 1.86 ($\pm 0,38$) ms, interval I-V – 4,65 ($\pm 0,66$) ms. The second group consisted of the 35 patients. The mean pure tone threshold was

41,6 ($\pm 18,3$) dB. In 55,56 % of the cases (10 patients) waves were not detected, In 14 cases (40%) wave V were visualized. And in 27,78 % (5 cases) ABR were positive, mean latency of wave V was 5,83 ($\pm 0,53$) ms, interval I-V - 4,33 ($\pm 0,6$) ms, interval III-V – 2,16 ($\pm 0,62$) ms. The third group was the smallest one and consists of the 18 patients. The mean pure tone threshold was 51,1 ($\pm 15,5$) dB. In 7 cases (38,89%) were noted wave V, in 55,56 % of cases (10 patients) waves were not detected, in 5 cases (27,78%) ABR were positive and demonstrate retrocochlear pathology. Amount them latency of wave V was 5,56 ($\pm 0,71$) ms, interval III-V – 2,29 ($\pm 0,72$)ms and interval I-V – 4,08 ($\pm 0,68$) ms.

Conclusions. The comparison and analysis of the mean pure tone audiometry and ABR data established a direct correlation. With the hearing loss aggravation the value of ABR parameters increases (interval I-V, III-V and latency wave V).

RELATION BETWEEN RECURRENT RESPIRATORY PAPILLOMATOSIS CLINICAL COURSE AND HPV TYPE.

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The article presents results of RRP clinical course assessment, depending on HPV type. We researched disease duration and process prevalence degree in a group of 20 patients with RRP in age from 19 to 52 years. The diagnosis was confirmed clinically, histologically and by PCR diagnostics. It was found that 80% of the patients were infected with HPV 6/8/11 types, 20% were infected with HPV 16/18 types. A correlation between severity of RRP and HPV type was revealed.

Key words: *Recurrent respiratory papillomatosis, human papillomavirus,*

Objective: to assess clinical course of RRP and it's relation with HPV 6/8/11 and HPV 16/18 type infection.

Materials and methods: We had examined a group of 20 patients at the age from 19 up to 52 years old (average age was 30,0 years $\pm$ 5 years), among them - 9 male and 11 female patients. Disease period was from 3 up to 43 years. The patients have undergone a course of treatment at otorhinolaryngology clinic of the First Saint Petersburg State Medical University with the confirmed diagnosis – recurrent respiratory papillomatosis. The diagnosis was confirmed intraoperatively histologically and by PCR diagnostics. DNA of human papilloma virus was found in all the patients, 14 patients were infected by combination of 6 or 8 or 11 types; 3 patients – HPV 16/18. And 2 patients had a combination of HPV 6/8/11 types with Epstein-Barr virus (EBV), 1 patient had HPV of 16\18 type in a combination with cytomegalovirus (CMV) infection.

Anatomic scale, developed by Dr. Craig Derkay et al. in 1998, was used for process prevalence assessment. The method is based on determination of anatomic picture of the disease. Namely: localization of papillomas (epiglottis, vestibular folds, vocal cords, anterior and posterior commissure, affection of trachea, bronchi and lungs). The parameters were summarized and translated into points, which were used for assessment of prevalence of the process.

Results and discussion: It was established that 70% of patients had HPV 6/8/11; 15% of patients were infected with HPV 16/18; 10% of examined persons had HPV 6/8/11 + EBV; and 5% of patients had a combination of HPV 16/18 and CMV.

In the examined group a ratio of patients with juvenile and adult form of the RRP was 40% (8 patients) and 60% (12 patients) accordingly.

In patients with juvenile form disease onset was at the age from 3 up to 5 years that corresponds to the tendency of age peaks of the disease onset, stated in the world literature. Age of disease manifestation in patients with adult form of RRP on the average has made 18 years.

Among the patients with RRP caused by HPV of 16/18 type, 75% had juvenile form of the disease and 15% had an adult form. In turn among patients with RRP caused by HPV of 6/8/11 type 35% of patients had juvenile form, 65% had an adult form.

Maximum value of the process dissemination points in patients with HPV of 6/8/11 type was 16 points, however on the average this parameter for the group of patients has made 6,5 points. In patients with HPV of 16/18 type the value of this parameter has made 30 points, on the average this parameter has made 17,5 points.

We have identified one case of malignant transformation of the process in a patient with HPV of 16/18 type in a combination with EBV.

Conclusion. RRP in 80% of cases was caused by HPV of 6/8/11 types. Revealed correlation between RRP severity and HPV type. Namely: in patients with respiratory recurrent papillomatosis caused by HPV 16/18 we've noticed higher process prevalence (17,5 in anatomic scale points) which may correspond to more aggressive course of RRP, against HPV of 6/8/11 type infection, where parameter averaged 6,5 anatomical scale points.

Identification of HPV and EBV in patient with tumor malignant transformation confirms high carcinogenicity of such combination of viruses.

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TYPE AND SEVERITY OF SEPTAL DEVIATION ARE NOT RELATED WITH THE DEGREE OF SUBJECTIVE NASAL OBSTRUCTION

Sarah Verhoeven, Bert Schmelzer

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ZNA Middelheim Hospital

Background: Septoplasty is a frequently performed operation by otolaryngologists to relieve nasal obstruction complaints. When objective measurements tools are not available, preoperative decision-making is based on careful clinical examination. Our aim was to evaluate the relationship between type and severity of septal deviation and patient-reported nasal obstruction.

Methodology: We included 196 patients. Patients indicated subjective nasal obstruction experienced during the past 1 month on a Visual Analog Scale (VAS). Patients underwent clinical examination to evaluate type and severity of septal deviation. We compared clinical examination findings with patient's VAS.

Results: We did not find a statistical difference of VAS score between the different types and severities of septal deviation. In 33.9% of the cases without septal deviation, there was a corresponding VAS score of 0. In 26,8% of the cases with septal deviation, there was no complaint of nasal obstruction (VAS = 0). In 7,4% of the cases, there was moderate to severe nasal obstruction complaint (VAS > 4) though no septal deviation was found.

Conclusions: These results demonstrate that patient-reported nasal obstruction varies greatly among patients with similar type of deviation and similar degree of deviation. Classification of septal deviation into type and severity cannot predict the degree of subjective nasal obstruction. Therefore, the decision to proceed to septoplasty has to be thoughtful, with

as much as information, based on the combination of patient's history, clinical examination, surgeon's experience and cautious interpretation of objective measurement tools.

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PEDIATRIC RHINOSINUSITIS AND THE ROLE OF ADENOIDECTOMY

Dilyana Vicheva

Department of Otorhinolaryngology, Medical University, Plovdiv, Bulgaria

Pediatric sinusitis is a common problem. Sinusitis in children is different than sinusitis in adults. Children are successfully treated with antibiotic therapy in most cases. Recurrent or chronic rhinosinusitis possibly caused by obstructive adenoid tissue causing stasis of secretions predisposing the nasal cavity to infection. In the rare child where medical therapy fails, surgical therapy can be used as a safe and effective method of treating sinus disease in children. There is growing support in the literature for adenoidectomy as a first-line surgical intervention for chronic rhinosinusitis in children. Other surgical options include endoscopic sinus surgery (ESS) too. Adenoidectomy should be most beneficial as a surgical option before ESS, especially in children with obstructive symptoms. The goal of surgery is to improve quality of life and prevent further disease.

HEARING IMPAIRMENT IN CHILDREN WITH CONGENITAL CYTOMEGALOVIRAL INFECTION.

M.Yu. Boboshko, S.M. Vikhnina.

The I.P. Pavlov First State Saint-Petersburg Medical University, Saint-Petersburg, Russia.

Cytomegaloviral infection (CMV) is reported to be registered worldwide in 0,5-2% of newborns. However, in Russia its actual prevalence is unknown due to absence of neonatal CMV screening. CMV is one of the main causes of development of non-genetic prelingual hearing loss. CMV could proceed in two forms: as acute (10%) or latent (90%) infection, with occurrence of sensorineural hearing loss (SNHL) expected in both cases. SNHL could be peripheral or central, mono- or bilateral. Its rate could vary from moderate to profound hearing loss.

Our study is **aimed** at assessment of SNHL frequency occurrence and improvement of topical diagnostics of hearing loss in children with congenital CMV.

Materials and methods: In the context of this investigation, we used retrospective data, that was obtained in the archive of a state hospital. The data includes anamnesis, treatment regimen, results of neonatal hearing screening (OAE, ASSR). These children have been involved into our research up to date and annually undergo audiologic examination, that embraces DPOAE and TEOAE, impedansometry, different variants of tonal threshold audiometry depending on each child's age and maturation. At the age of 4 month-2 years children undergo behavioral audiometry, that is based on reflex reactions, play audiometry is used for children of 2-5 years old, and traditional audiometry is utilized for children elder than

5 years old. Revealing of central hearing impairment is possible only in children elder than 5 years.

Results: We have analyzed 63 cases of children with congenital CMV, that had been undergoing treatment in the state hospital in 2009-2015. The diagnosis of CMV was verified, using serological methods and PCR. Among all patients, 52 were born prematurely (25 were delivered on 23-28 weeks of gestation, 27– on 29-36 weeks), 11 were born full-term. All children have undergone neonatal hearing screening (ASSR and/or OAE) with following results: 37 patients passed the test, 13 had ‘pass’ result only for one ear and ‘refer’ – for another, 8 children didn’t pass the test. Recurrent audiologic examination has already been performed at 32 children at the age of 2 month – 7 years. Congenital hearing loss was diagnosed in 3 children, among them 2 patients are bilaterally deaf, slight monolateral SNHL is defined in one child. One patient developed late-onset profound hearing loss by the age of one year. While examining one more child, we obtained 60 dB thresholds, using ABR. But we take into account, that maturation of central auditory tract takes more time in children, that were born earlier, so this patient needs to be recurrently examined by the age of 9 months and than thresholds may be lower. Central hearing evaluation tests have been performed only in 6 children, but because of their early age and low sampling it is untimely to conclude whether they have central hearing impairments or not.

Conclusion: As our research is in progress, we have not acquired final results yet. However, we can already claim that neonatal CMV screening is absolutely essential because of the possibility of complicated course of undiagnosed latent infection. It is prominent to perform annual audiologic examinations for all children with congenital CMV by the age of 6 years, according to universal protocol, that have to comprise tests for peripheral and central hearing function assessment.

PATHOGENESIS, DIAGNOSIS AND TREATMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS)

Dr. A.V.M.T. Vroegop, prof. B. Schmelzer

*Department of Otorhinolaryngology and Head and Neck Surgery
Middelheim Hospital Antwerp, Belgium*

Obstructive sleep apnea syndrome (OSAS) is characterized by recurrent episodes of apnea and hypopnea during sleep that are caused by repetitive partial or complete upper airway collapse and often result in decreased oxygen blood levels and arousal from sleep. This results in sleep fragmentation and is accompanied by symptoms such as excessive daytime sleepiness, witnessed snoring or apneas, recurrent awakening from sleep, or choking or gasping during sleep.

Complex factors contribute to the pathogenesis of OSA, including changes in upper airway behavior, mechanical and tissue characteristics, and neuromuscular function.

A full-night polysomnography (PSG) is traditionally considered the most comprehensive and reliable objective monitoring method for the diagnosis of sleep-related breathing disorders.

Continuous positive airway pressure (CPAP) was introduced by Sullivan in 1981 and has generally become the first-line therapy for moderate to severe OSA since then. CPAP consists of an (oro)nasal mask that is connected to a flow generator by a tube. The flow generator provides a pressure high enough to prevent upper airway collapse and thereby maintain airway patency. Oral appliance therapy can be a first-line treatment for patients with mild to moderate OSA or an alternative for patients with mild to severe OSA who are

reluctant or non-responding to CPAP, or fail to use CPAP. Surgical procedures for OSA include upper airway surgery as well as bariatric surgery. Upper airway surgery can involve soft tissue and/or skeletal structures, and tracheostomy. Most of these surgical procedures permanently modify upper airway anatomy, aiming at endured improvement of the upper airway patency.

To improve treatment success rates, upper airway behavior can be evaluated. This is not only to gain a better insight into the complex pathophysiology of upper airway collapse but also helps to select the most appropriate therapeutic option for the individual patient. The role of drug-induced sleep endoscopie (DISE) will be specifically discussed.

CLINICAL OTOGENETICS: FROM RESEARCH TO IMPROVED CLINICAL CARE

Nicole J.D. Weegerink

Objective. Hearing impairment is the most common birth defect and the most prevalent sensorineural disorder in developed countries. More than 50% of prelingual hearing impairment is genetic, most often autosomal recessive and nonsyndromic. Postlingual hearing impairment is much more frequent than prelingual hearing impairment and has mostly a multifactorial inheritance, although monogenic forms exist with mainly autosomal dominant inheritance. The heterogeneity in autosomal dominant nonsyndromic hearing impairment (DFNA) is high with multiple genes implicated in the pathogenesis. To distinguish phenotypic differences in nonsyndromic hearing impairment, genotype-phenotype correlations are presented.

Methods. Describing large groups of patients with hereditary hearing impairment are very important for establishing genotype-phenotype correlations. An Age Related Typical Audiograms (ARTA) gives a comprehensive phenotype presentation and is therefore extremely useful in characterization of progressive DFNA types.

Results. An ARTA can be used to compare the type of hearing impairment, the age of onset and the progression of hearing impairment in relation to the genotypes. An ARTA does not only help in selecting potentially interesting loci for linkage analysis or genes for mutation analysis, but it is also valuable for genetic and individual counseling.

Conclusions. Establishing genotype-phenotype correlations will facilitate the discovery of new deafness causing genes, the development of routine DNA-diagnostics of hereditary hearing impairment and the understanding of the (dys)function of the inner ear. There is no doubt that additional groups of patients with hereditary hearing impairment need to be collected to distinguish phenotypic differences between different genetic types of hearing impairment.

PORA WEBINARS – TEACHING AND COUNSELLING RUSSIAN SPEAKING PROFESSIONALS AND PARENTS

Dr.Dr.h.c.Monika Lehnhardt-Goriany

Our PORA programme is targeting groups of parents and professionals working with deaf and/or hearing impaired children. We started this initiative in 2009 specifically addressing an audience in countries of the former Soviet Union. We were convinced: It was “high time” (russ. PORA!) to give easy and cost free access to knowledge sharing, exchange of experience and to supporting each other through direct networking.

Over the last 6 years > 40 experts from 7 countries presented in > 100 sessions LIVE and covered a broad range of topics (e.g. anatomy and pathology of hearing, audiological assessment, surgical options to treat hearing loss, hearing aids, cochlear implants, FM systems, fittings of speech processors and various methods of rehabilitation).

In Forum Discussions two weeks after the presentation the speaker answered questions of the participants – Live again!

Speaker, interpreter, moderator and participants meet in the LiveOnline room by simply logging in from their computer or smartphone clicking on the corresponding link.

Everybody has the possibility to speak or – according to his/her preferred mode of communication – to write. This conveys a sense of presence.

Recordings are available for those who missed the session or who felt the need or desire to listen to it once more.

In March we started a new cycle with a new managing team. Eulalia Juan (Spain), Marina Gureva (St. Petersburg), Isabel Monteiro and Pedro Bras (Portugal), Dimity Dornan (Australia), Bodo Bertram (Germany) together with me have compiled a two years programme based on topics proposed by professionals and parents from different countries.

The structure – presentation and Forum Discussion two weeks later always on Sundays at 5 p.m. Moscow time - will remain unchanged.

We are expecting an increasing number of participants and plan to offer this educational and counselling programme to the Spanish / Portuguese speaking world as well.

**Украинская ассоциация отиатров, отонейрохирургов и отоневрологов
Национальная медицинская академия последипломного образования
имени П.Л.Шупика**

European Academy of Otology & Neuro-Otology

В 2016 ГОДУ ПРОВОДЯТ

КУРСЫ МИКРОХИРУРГИИ УХА И ОТОНЕЙРОХИРУРГИИ

6-10 июня и 14-18 ноября

Курсы проводят: проф. Ю.А.Сушко, проф. А.Л.Косаковский, д.м.н. О.Н.Борисенко, д.м.н. Н.С.Мищанчук, д.м.н. И.А.Сребняк, к.м.н. А.Л.Бобров, к.м.н. А.О.Скорохода, А.В.Папп.

Недельные курсы включают лекции по хирургической анатомии височной кости, хирургии хронического гнойного среднего отита и холестеатомы, секреторного среднего отита и ретракционного кармана, отосклероза, головокружения, гломусных опухолей, лицевого нерва, сенсоневральной тугоухости, акустической невриномы и кохлеарной имплантации, КТ и МРТ в диагностике заболеваний височной кости; демонстрации операций, клинический разбор больных, работу на блоках височной кости. Количество мест ограничено.

Заявки и справки: Украина, 03680 г. Киев, ул. Зоологическая, 3, Институт отоларингологии им. проф. А.И.Коломийченко, отдел микрохирургии уха и отонейрохирургии. Борисенко О.Н.

Тел./Факс: +380444837047; e-mail: oleg_borysenko@ukr.net; www.otology.com.ua

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РЕГИСТРАЦИОННАЯ КАРТА

КУРСЫ МИКРОХИРУРГИИ УХА И ОТОНЕЙРОХИРУРГИИ 2016 ГОДА

☐ 6-10 июня

☐ 14-18 ноября

выберите удобную для вас дату и зачеркните соответствующий квадрат

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ИНФОРМАЦИОННОЕ ПИСЬМО
о проведении XII Межрегиональной научно-практической конференции
оториноларингологов
Сибири и Дальнего Востока с Международным участием
«Актуальные вопросы оториноларингологии»

Глубокоуважаемые коллеги!

Приглашаем Вас, принять участие в проведении конференции и издании сборника научных работ Амурской государственной медицинской академии и Научного общества оториноларингологов Амурской области посвященного XI Межрегиональной научно-практической конференции оториноларингологов Сибири и Дальнего Востока с Международным участием «Актуальные вопросы оториноларингологии», которая состоится 30 июня 2016 года в г. Благовещенске.

ОРГАНИЗАТОРЫ:

Амурская государственная медицинская академия Министерства здравоохранения РФ

Министерство здравоохранения Амурской области

Научно-практическое общество оториноларингологов Амурской области

ОСНОВНОЙ ЦЕЛЬЮ конференции является обобщение результатов фундаментальных и прикладных исследований, определение приоритетных направлений в решении актуальных проблем современной оториноларингологии на территории Сибири и Дальнего Востока, внедрение образовательных программ для врачей.

ПРОГРАММА включает научные доклады на пленарных заседаниях ведущих российских и зарубежных ученых и специалистов в области оториноларингологии, лекции для практикующих врачей, выставки современных лекарственных средств и изделий медицинского назначения. Участниками межрегиональной конференции являются врачи-оториноларингологи, педиатры, врачи общей практики, аллергологи-иммунологи, научные работники.

ВОПРОСЫ, ПЛАНИРУЕМЫЕ К ОБСУЖДЕНИЮ:

Эпидемиология болезней лор органов на территории Сибири и Дальнего Востока.

Морфофункциональные механизмы развития болезней лор органов при воздействии экстремальных экологических факторов.

Современные технологии диагностики и лечения заболеваний ЛОР-органов.

Современные подходы к фармакологической терапии острой и хронической патологии лор органов.

Диагностика и лечение патологии лор органов в детском возрасте.

Технологии реабилитации и профилактики острых и хронических заболеваний лор органов с использованием рекреационного потенциала Сибири и Дальнего Востока.

Формы и методы совершенствования оториноларингологической помощи населению в социально-демографических условиях Сибири и Дальнего Востока.

Реконструктивно-восстановительная хирургия в оториноларингологии.

Диагностика и лечение онкологических заболеваний в оториноларингологии.

РЕГИСТРАЦИЯ: Заявки на участие с докладом принимаются до 30 апреля. Для участия в Межрегиональной научно-практической конференции оториноларингологов Сибири и Дальнего Востока с Международным участием

необходимо направить в секретариат оргкомитета соответствующую заявку. Материалы будут опубликованы в сборнике научных трудов.

Статья должна быть напечатана через 1,5 интервала, шрифт Times New Roman, кегль – 12, текстом статьи оформляется в редакторе Word 2000 или Word 2003 (с расширением - все документы Word). Объем работы в количестве страниц не ограничен. Статья может содержать рисунки, таблицы, список литературы. Могут быть представлены в сборнике и интересные клинические наблюдения. В начале первой страницы указывается название статьи, инициалы и фамилии авторов, учреждение, из которого вышла работа. Срок подачи работ для опубликования до 1 апреля 2016 года.

Статьи, возможно, представить по электронной почте: blotskiy@gmail.com.

Продолжением конференции будет культурная программа, которая пройдет в КНР.

Статьи присылать на E-mail: blotskiy@gmail.com

КОНТАКТЫ:

675000, Благовещенск, ул. Горького 95, ГБОУ ВПО Амурская государственная медицинская академия Министерства здравоохранения РФ, зав. кафедрой оториноларингологии и офтальмологии, главный внештатный специалист МЗ АО, председатель областного научно-практического общества оториноларингологов, д.м.н., проф. Блоцкий Александр Антонович.: blotskiy@gmail.com, Тел./факс: (416-2) 42-93-28. 8-914-574-80-63.

Официальный сайт: <http://www.amursma.ru>

Конференция оториноларингологов в г. Благовещенске с 2014 года приобрела статус **Всероссийской научно-практической конференции** и входит в список мероприятий проводимых Министерством Здравоохранения РФ.

Dear Colleges, Dear Friends!

It is a great pleasure for us to inform you that the ***Second National Symposium on Obstructive Sleep Apnea and Snoring with International Participation will held in the city of Varna, Bulgaria, on August 26-27, 2016.***

The Symposium will be jointly organized by the and the Medical University of Varna "Professor Paraskev Stoyanov". More than 120 otorhinolaryngologists, dentists, anaesthesiologists, neurologists, pulmologists, physiologists and heath managers from Bulgaria as well as eight eminent scientists from Germany, Turkey, Norway, Belgium and Egypt actively contributed to the successful First National Symposium on Obstructive Sleep Apnea (OSA) and Snoring with International Participation that was held in the city of Varna, on October 16-18, 2014.

The scientific programme will include scientific sessions with invited lectures, oral and poster presentations as well as workshops, firm presentations and a round table discussion again.

For more detailed information, please, do not hesitate to contact us at your earliest convenience. We are looking forward to welcoming you in the sunny city of Varna in August, 2016!

***Assoc. Prof. Mario Milkov, MD, PhD Chairman of the Symposium,
President of the Bulgarian Society of Obstructive Sleep Apnea and Snoring,
Secretary of the Bulgarian Society of Otorhinolaryngology***



**ГУ «ИНСТИТУТ ОТОЛАРИНГОЛОГИИ
им. проф. А.И.Коломийченко НАМН Украины»**

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Украинская ассоциация отиатров, отонейрохирургов и отоневрологов

15-17 сентября 2016 года проводят

**МЕЖДУНАРОДНЫЙ СЕМИНАР по МИКРОХИРУРГИИ УХА
«ПРОГРЕСС В ОТИАТРИИ»**

с участием проф. К.Вэнсана и д-р Д.Портманна (Франция), проф. Ю.Ковалю и д-р С.Кремпаска (Словакия), проф. С.Розаля и д-р К.Хоффманн (Германия), д-р М.Фальчони (Италия) и Украины

Семинар включает лекции, демонстрации операций, работу на блоках височной кости, круглый стол, мастер-класс, дискуссию. Рабочие языки: украинский, английский и русский.

Стоимость участия в семинаре: с диссекцией височной кости - 100 евро в гривнах (по курсу НБУ), для членов Ассоциации и интернов - 50 евро. Без диссекции височной кости - 50 евро в гривнах (по курсу НБУ), для членов Ассоциации и интернов - 25 евро.

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Тел./Факс: +38044 4837047; e-mail: oleg_borysenko@ukr.net; www.otology.com.ua



РЕГИСТРАЦИОННАЯ КАРТА

**МЕЖДУНАРОДНЫЙ СЕМИНАР ПО МИКРОХИРУРГИИ УХА
«ПРОГРЕСС В ОТИАТРИИ»
15-17 СЕНТЯБРЯ 2016 ГОДА**

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ИНФОРМАЦИОННОЕ ПИСЬМО
О проведении 12-й научно-практической конференции врачей КЧР
«Современные проблемы клинической медицины»

Глубокоуважаемые коллеги!

Приглашаем Вас, принять участие в проведении 12-й научно-практической конференции «Современные проблемы клинической медицины» и издании сборника научных работ врачей Карачаево-Черкесской республики с Международным участием, которая пройдет 30 сентября 2016г. в г.Черкесске.

ОРГАНИЗАТОРЫ:

- Министерство здравоохранения КЧР
- Карачаево-Черкесская республиканская клиническая больница
- Медицинский институт Северо-Кавказской государственной гуманитарно-технологической академии

ОСНОВНОЙ ЦЕЛЬЮ конференции является объединение усилий врачей различных регионов в оказании качественной медицинской помощи населению, обобщении результатов научных исследований, определение приоритетных направлений в решении актуальных проблем современной клинической медицины, общение и дискуссии по специальности.

РЕГИСТРАЦИЯ: Заявки на участие с докладом принимаются до 1 июня. Для участия в научно-практической конференции врачей КЧР с Международным участием необходимо направить в секретариат оргкомитета соответствующую заявку. Материалы будут опубликованы в сборнике научных трудов.

Просим Вас указать тему Вашего сообщения, рассчитанного на 10 мин. И своевременно направлять материалы своих работ, которые необходимо сдавать по следующим **правилам:**

Статья должна быть напечатана через 1,5 интервала, шрифт Times New Roman, кегль – 12, текстом статьи оформляется в редакторе Word 2000 или Word 2003 (с расширением - все документы Word). Объем работы в количестве страниц не ограничен. Статья может содержать рисунки, таблицы, список литературы. Могут быть представлены в сборнике и интересные клинические наблюдения. В начале первой страницы указывается название статьи, инициалы и фамилии авторов, учреждение, из которого вышла работа. Срок подачи работ для опубликования до 1 июня 2016 года.

Работа должна быть тщательно отредактирована как научно, так и стилистически.

Целесообразно формулировать цель и задачи работы, а в конце указывать основные выводы.

Каждая работа должна быть представлена и в электронном варианте – 3,5 дискета или компакт диск (СД). Работа представляется в виде одного файла.

Статьи возможно представить по электронной почте: E-mail: gujsan@mail.ru

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8(928)390-83-99 – ст. лаборант Ураскулова Белла Барадиновна.

КОНТАКТЫ:

369000, Черкесск, ул.Гвардейская,1, КЧРКБ, ЛОРОтделение, зав. кафедрой оториноларингологии-хирургии головы и шеи, главному внештатному специалисту МЗ КЧР, Заслуженному врачу РФ, д.м.н., проф. Гюсан Арсентию Ониковичу. E-mail: Gujsan@mail.ru, Тел. +7(928)386 99 57.

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Для формирования заказа просим Вас сообщить количество пособий.

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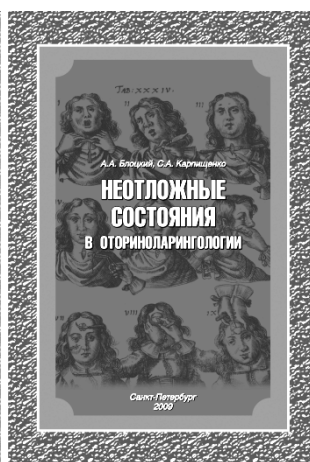
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ТРЕБОВАНИЯ К РУКОПИСЯМ, НАПРАВЛЯЕМЫМ В ЖУРНАЛ

(составлены с учетом требований Высшей аттестационной комиссии РФ и «Единых требований к рукописям, представляемым в биомедицинские журналы», разработанных Международным комитетом редакторов медицинских журналов)

ОБЩИЕ ПРАВИЛА

Статья должна соответствовать Положению о принципах редакционной этики научно-практических журналов Издательства «Медицина»

http://medlit.ru/static/pages/files/00%20General/140227_edit_ethics_ru.pdf

Статья должна иметь визу руководителя и сопровождаться официальным направлением от учреждения, из которого выходит, в необходимых случаях – экспертным заключением. В направлении следует указать, является ли статья диссертационной.

Статья должна быть подписана всеми авторами, что дает право журналу на ее публикацию в бумажном и/или электронном формате и размещение в сети Интернет.

Принципы, которыми должен руководствоваться автор научных публикаций

Автор (или коллектив авторов) несет первоначальную ответственность за новизну и достоверность результатов научного исследования:

- Автор статьи представляет достоверные результаты проведенных исследований.
- Автор гарантирует, что результаты исследования, изложенные в представленной рукописи, полностью оригинальны. Заимствованные фрагменты или утверждения сопровождаются обязательным указанием автора и первоисточника. Чрезмерные заимствования, а также плагиат в любых формах, включая неоформленные цитаты, перефразирование или присвоение прав на результаты чужих исследований, неприемлемы.
- Автор не предоставляет в журнал рукопись, которая была отправлена в другой журнал и находится на рассмотрении, а также статью, уже опубликованную в другом журнале.
- Редакция вправе запросить у авторов необработанные данные, имеющие отношение к рукописи, необходимые для рецензирования. Автор должен предоставить доступ к такой информации и в любом случае сохранять эти данные в течение адекватного периода времени после публикации.
- Все лица, внесшие существенный вклад в проведение исследования, указываются как соавторы статьи.
- Автор четко обозначает в рукописи тот факт, если в работе использовались химические продукты, процедуры или оборудование, при эксплуатации которых возможен необычный риск.
- При участии в работе людей или животных как объектов исследования, автор указывает в рукописи, что все исследования соответствуют действующему законодательству и нормативам исследовательских организаций. От всех людей, ставших объектами исследования, получает информированное согласие, о чем указывается в рукописи. Права на неприкосновенность частной жизни соблюдаются.
- При обнаружении автором существенных ошибок или неточностей в статье на этапе ее рассмотрения или после опубликования, он уведомляет об этом редакцию журнала в кратчайшие сроки. Если получены сведения от третьей стороны о том, что публикация содержит существенные ошибки, автор обязан изъять работу или исправить ошибки в максимально короткие сроки.

Примечание: редакция журнала оставляет за собой право информационной проверки всех поступающих на рецензирование текстов в программе "Антиплагиат.ВУЗ" и прекращения любого рода сотрудничества как с авторами, предоставившими материалы с некорректными заимствованиями чужих текстов и идей, так и с организациями, рекомендовавшими данные работы к публикации.

Статья присылается в редакцию по электронной почте или обычной почтой (1 экз. распечатки с обязательным приложением электронной версии).

Статья должна быть напечатана шрифтом Times New Roman или Arial, размер шрифта 12, с двойным интервалом между строками, все поля, кроме левого, шириной 2 см, левое поле 3 см. Все страницы должны быть пронумерованы. Автоматический перенос слов использовать нельзя.

Вся текстовая часть статьи должна быть записана в 1 файле (титульный лист, резюме, ключевые слова, текст статьи, таблицы, список цитированной литературы, сведения об авторах); файл с текстом статьи должен быть назван по фамилии первого автора статьи (Иванов. Текст). Рисунки и сканы документов записываются отдельными файлами, также содержащими фамилию первого автора (Иванов. Рисунок).

Объем статей не должен превышать 18 страниц (включая иллюстрации, таблицы, резюме и список литературы), рецензий и информационных сообщений – 3 с.

ТИТУЛЬНЫЙ ЛИСТ

Титульный лист должен начинаться со следующей информации:

- 1) фамилия и инициалы автора (авторов),
- 2) название статьи,
- 3) полное наименование учреждения, в котором работает автор, в именительном падеже с обязательным указанием статуса организации (аббревиатура перед названием) и ведомственной принадлежности,
- 4) почтовый индекс учреждения, город, страна;
- 5) контактная информация: Ф.И.О. полностью и адрес электронной почты автора, ответственного за переписку.

Если авторов несколько, у каждой фамилии и соответствующего учреждения проставляется цифровой индекс. Если все авторы статьи работают в одном учреждении, указывать место работы каждого автора отдельно не нужно, достаточно указать учреждение один раз. Если у автора несколько мест работы, каждое обозначается отдельным цифровым индексом

Образец начала титульного листа:

Рахманин Ю.А.¹, Зыкова И.Е.¹, Федичкина Т.П.¹, Соленова Л.Г.²

ПОДХОДЫ К ИЗУЧЕНИЮ РОЛИ ВОДНОГО ФАКТОРА В РАСПРОСТРАНЕННОСТИ ИНФЕКЦИИ Helicobacter pylori

¹ФГБУ НИИ экологии человека и гигиены окружающей среды им. А.Н. Сысина Минздрава РФ, 119121, Москва, Россия; ²ФГБУ Российский онкологический научный центр им. Н.Н. Блохина РАМН, 115211, Москва, Россия

Для корреспонденции: Соленова Лия Геннадьевна, E-mail: lsolenova@mail.ru

For correspondence: Solenova Liya, E-mail: lsolenova@mail.ru

В одном номере журнала может быть опубликовано не более 2-х работ одного автора (авторов).

ПЛАН ПОСТРОЕНИЯ ОРИГИНАЛЬНЫХ СТАТЕЙ

Дальнейший план построения оригинальных статей должен быть следующим: **резюме и ключевые слова на русском языке, резюме и ключевые слова на английском языке**, краткое введение, отражающее состояние вопроса к моменту написания статьи и задачи настоящего исследования, материалы и методы, результаты и обсуждение, выводы по пунктам или заключение, информация о финансовой поддержке работы, гранты, благодарности, указание на конфликт интересов при его наличии, список цитированной литературы.

Изложение статьи должно быть ясным, сжатым, без длинных исторических введений и повторений. Предпочтение следует отдавать новым и проверенным фактам, результатам длительных исследований, важных для решения практических вопросов.

Методика исследований должна быть описана очень четко, так чтобы ее легко можно было воспроизвести.

При представлении в печать экспериментальных работ следует руководствоваться «Правилами проведения работ с использованием экспериментальных животных». Помимо вида, пола и количества использованных животных, авторы обязательно должны указывать применявшиеся при проведении болезненных процедур методы обезболивания и методы умерщвления животных.

Нужно указать, являются ли приводимые числовые значения первичными или производными, привести пределы точности, надёжности, интервалы достоверности, оценки, рекомендации, принятые или отвергнутые гипотезы, обсуждаемые в статье.

СТАНДАРТЫ

Все термины и определения должны быть научно достоверны, их написание (как русское, так и латинское) должно соответствовать «Энциклопедическому словарю медицинских терминов» (в 3-х томах, под ред. акад. Б.В. Петровского).

Лекарственные препараты должны быть приведены только в международных непатентованных названиях, которые употребляются первыми, затем в случае необходимости приводятся несколько торговых названий препаратов, зарегистрированных в России (*в соответствии с информационно-поисковой системой «Клифар-Госреестр» [Государственный реестр лекарственных средств]*).

Желательно, чтобы написание ферментов соответствовало стандарту *Enzyme Classification*.

Желательно, чтобы наследуемые или семейные заболевания соответствовали международной классификации наследуемых состояний у человека (*Mendelian Inheritance in Man* [<http://ncbi.nlm.nih.gov/Omim>]).

Названия микроорганизмов должны быть выверены в соответствии с «Энциклопедическим словарём медицинских терминов» (в 3-х томах, под ред. акад. Б.В. Петровского) или по изданию «Медицинская микробиология» (под ред. В.И. Покровского).

Написание Ф.И.О., упоминаемых в тексте, должно соответствовать списку литературы.

Рукопись может сопровождать словарь терминов (неясных, способных вызвать у читателя затруднения при прочтении).

Помимо общепринятых сокращений единиц измерения, физических, химических и математических величин и терминов (например, ДНК), допускаются аббревиатуры словосочетаний, часто повторяющихся в тексте. Все вводимые автором буквенные обозначения и аббревиатуры должны быть расшифрованы в тексте при их первом упоминании. Не допускаются сокращения простых слов, даже если они часто повторяются.

Дозы лекарственных средств, единицы измерения и другие численные величины должны быть указаны в системе СИ.

АВТОРСКИЕ РЕЗЮМЕ

Авторское резюме к статье является основным источником информации в отечественных и зарубежных информационных системах и базах данных, индексирующих журнал. Резюме доступно на сайте ОАО «Издательство «Медицина»», на сайте Научной электронной библиотеки и индексируется сетевыми поисковыми системами.

По резюме к статье читателю должна быть понятна суть исследования. По резюме читатель должен определить, стоит ли обращаться к полному тексту статьи для получения более подробной, интересующей его информации. Резюме должно излагать только существенные факты работы. Приветствуется структура резюме, повторяющая структуру статьи и включающая введение, цели и задачи, методы, результаты, заключение (выводы). Однако: предмет, тема, цель работы указываются в том случае, если они не ясны из заглавия статьи; метод или методологию проведения работы целесообразно описывать в том случае, если они отличаются новизной или представляют интерес с точки зрения данной работы.

Резюме должно начинаться с информации, содержащейся на титульном листе. Объем текста авторского резюме должен быть от 200 до 250 слов.

Резюме должно сопровождаться несколькими ключевыми словами или словосочетаниями, отражающими основную тематику статьи и облегчающими классификацию работы в компьютерных поисковых системах. Ключевые слова перечисляются через точку с запятой. В конце перечисления ставится точка.

Резюме и ключевые слова должны быть представлены как на русском, так и на английском языках. При переводе фамилии авторов рекомендуется транслитерировать так же, как в

предыдущих публикациях или по системе **BGN (Board of Geographic Names)**, см. сайт <http://www.translit.ru>. В отношении организации(ий) важно, чтобы был указан официально принятый английский вариант наименования.

ТРЕБОВАНИЯ К РИСУНКАМ

Черно-белые штриховые рисунки: формат файла – TIFF (расширение *.tiff), любая программа, поддерживающая этот формат (Adobe PhotoShop, Adobe Illustrator и т. п.); режим – bitmap (битовая карта); разрешение 600 dpi (пиксели на дюйм); возможно использование сжатия LZW или другого. Текст на иллюстрациях должен быть четким.

ПОДПИСИ К РИСУНКАМ И ФОТОГРАФИЯМ

Подписи к рисункам и фотографиям группируются вместе и даются на отдельной странице. Каждый рисунок должен иметь общий заголовок и расшифровку всех сокращений. В подписях к графикам указываются обозначения по осям абсцисс и ординат и единицы измерения, приводятся пояснения по каждой кривой. В подписях к микрофотографиям указываются метод окраски и увеличение.

ОФОРМЛЕНИЕ ТАБЛИЦ

Сверху справа необходимо обозначить номер таблицы (если таблиц больше, чем одна), ниже дается ее название. Сокращения слов в таблицах не допускаются. Все цифры в таблицах должны соответствовать цифрам в тексте и обязательно должны быть обработаны статистически. Таблицы можно давать в тексте, не вынося на отдельные страницы.

БИБЛИОГРАФИЧЕСКИЕ СПИСКИ

В оригинальных статьях допускается цитировать не более 30 источников, в обзорах литературы - не более 60, в лекциях и других материалах - до 15. Библиография должна содержать, помимо основополагающих работ, публикации за последние 5 лет. 6

В списке литературы все работы перечисляются в порядке их цитирования. Библиографические ссылки в тексте статьи даются цифрой в квадратных скобках.

Документы (Приказы, ГОСТы, Медико-санитарные правила, Методические указания, Положения, Постановления, Санитарно-эпидемиологические правила, Нормативы, Федеральные законы) нужно указывать не в списках литературы, а сносками в тексте.

Ссылки на неопубликованные работы не допускаются.

Библиографическое описание книги (после ее названия): город (где издана); после двоеточия название издательства; после точки с запятой год издания. Если ссылка дается на главу книги: (авторы); название главы; после точки ставится "В кн.:" или "In:" и фамилия(и) автора(ов) или редактора(ов), затем название книги и выходные данные.

Библиографическое описание статьи из журнала: автор(ы); название статьи; название журнала; год; том, в скобках номер журнала, после двоеточия цифры первой и последней страниц.

При авторском коллективе до 6 человек включительно упоминаются все, при больших авторских коллективах 6 первых авторов "и др.", в иностранных "et al."); если в качестве авторов книг выступают редакторы, после фамилии, после запятой, следует ставить "ред.", в иностранных "ed."

Библиографические описания должны оформляться в виде трехколоночной таблицы. В первом столбце – порядковый номер источника в порядке его упоминания в тексте статьи. Во втором столбце – библиографическое описание источников для публикации в печатной русскоязычной версии журнала, в третьем – библиографическое описание, предназначенное для загрузки в международные индексы цитирования и размещения на англоязычной части сайта журнала. Ссылки на зарубежные источники выглядят в обоих случаях одинаково.

Фамилии и инициалы всех авторов на латинице и название статьи на английском языке следует приводить так, как они даны в оригинальной публикации (если в оригинальной публикации нет названия статьи на английском языке и ФИО авторов на латинице; необходимо транслитерировать ФИО и название статьи в стандарте BSI (транслитерация — передача русского слова буквами латинского алфавита, автоматически транслитерация в стандарте BSI

производится на страничке <http://ru.translit.net/?account=bsi>)). Далее в квадратных скобках следует написать переведенное на английский язык вами название статьи. Далее следует название русскоязычного журнала в транслитерации, далее следуют выходные данные — год, том, номер, страницы. В круглые скобки помещают язык публикации (In Russ.). В конце библиографического описания помещают doi статьи, если таковой имеется. [1]. Akulich M.M. ЗДЕСЬ ДОЛЖНА БЫТЬ ТРАНСЛИТЕРАЦИЯ НАЗВАНИЯ, [А ДАЛЕЕ В КВАДРАТНЫХ СКОБКАХ ПЕРЕВОД НАЗВАНИЯ] / M.M. Akulich, V.V. Pit // ЗДЕСЬ ДОЛЖНА БЫТЬ ТРАНСЛИТЕРАЦИЯ ИСТОЧНИКА. 2011. №8. pp. 34-43. (In Russ.)

Все остальные источники приводятся на латинице с использованием транслитерации в стандарте BSI с сохранением стилового оформления русскоязычного источника. В круглые скобки помещают язык публикации (In Russ.).

Ссылки на авторефераты диссертаций, материалы конференций, патенты и юридические документы можно приводить только в случае, если они имеются в открытом доступе в Интернете, с пометкой: Доступно по: <http://www.....> Ссылка активна на чч.мм.гггг. (Available at: <http://www....> Accessed month, day, year).

Например:

Шиленкова В.В. Острые и рецидивирующие синуситы у детей (диагностика и лечение): Автореф. дисс. ... докт. мед. наук. Ярославль; 2008. Доступно по: <http://www.gastroscan.ru/disser/shilenkova-vv.pdf>. Ссылка активна на 12 октября, 2015.

Shilenkova V.V. Ostrye i retsidiviruyushchie sinusity u detei (diagnostika i lechenie) [Acute and recurrent sinusitis in children (diagnosis and treatment)]: Avtoref. diss. ... dokt. med. nauk. Yaroslavl'; 2008. (In Russ.). Available at: <http://www.gastroscan.ru/disser/shilenkova-vv.pdf>. Accessed October 12, 2015.

Козлов В.С., Державина Л.Л., Шиленкова В.В. Возможности акустической ринометрии и передней активной риноманометрии в изучении носового цикла. Российская ринология. 2002;1:4-10.

Kozlov VS, Derzhavina LL, Shilenkova VV. Acoustic rhinometry and anterior active rhinomanometry in the investigation of nasal cycle. Rossiiskaya rinologiya. 2002;1:4-10. (In Russ.).

Grutzenmacher S., Lang C., Mlynski R., Mlynski B., Mlynski G. Long-term rhinoflowmetry: a new method for functional rhinologic diagnostics. American Journal of Rhinology. 2005;19(1):53-57.

Grutzenmacher S., Lang C., Mlynski R., Mlynski B., Mlynski G. Long-term rhinoflowmetry: a new method for functional rhinologic diagnostics. American Journal of Rhinology. 2005;19(1):53-57.

Учитывая требования международных систем цитирования, библиографические списки входят в англоязычный блок статьи и, соответственно, должны даваться не только на языке оригинала, но и в латинице (романским алфавитом). Поэтому авторы статей должны давать список литературы в двух вариантах: один на языке оригинала (русскоязычные источники кириллицей, англоязычные латиницей), и отдельным блоком тот же список литературы (References) в романском алфавите для международных баз данных, повторяя в нем все источники литературы, независимо от того, имеются ли среди них иностранные. Если в списке есть ссылки на иностранные публикации, они полностью повторяются в списке, готовящемся в романском алфавите.

Транслитерируются фамилии авторов и русскоязычные названия источников. Переводятся на английский язык названия статей, монографий, сборников статей, конференций с указанием после выходных данных, которые даются в цифровом формате, его языка (in Russian). Название источника выделяется курсивом.

Список литературы в латинице может готовиться с помощью систем транслитерации свободного доступа (<http://www.translit.ru>) и переводчика **Google**. Вручную делать

транслитерацию не допускается в целях избежания ошибок. Перевод, безусловно, требует редактирования.

Поскольку возможны различные варианты транслитерации фамилий, при приготовлении ссылок на статьи, опубликованные в журналах издательства «Медицина», рекомендуется использование данных с сайтов www.medlit.ru или www.elibrary.ru.

ТЕХНОЛОГИЯ ПОДГОТОВКИ ССЫЛОК С ИСПОЛЬЗОВАНИЕМ СИСТЕМЫ АВТОМАТИЧЕСКОЙ ТРАНСЛИТЕРАЦИИ И ПЕРЕВОДЧИКА

На сайте <http://www.translit.ru> можно воспользоваться программой транслитерации русского текста в латиницу.

1. Входим в программу Translit.ru. В окошке «варианты» выбираем систему транслитерации BGN (Board of Geographic Names). Вставляем в специальное поле весь текст библиографии, кроме названия книги или статьи, на русском языке и нажимаем кнопку «в транслит».
2. Копируем транслитерированный текст в готовящийся список References.
3. Переводим с помощью переводчика Google название статьи, монографии, сборника, конференции и т.д. на английский язык, переносим его в готовящийся список. Перевод, безусловно, требует редактирования.
4. Объединяем описания в транслите и переводное, оформляя в соответствии с принятыми правилами. При этом необходимо раскрыть место издания (Moscow) и, возможно, внести небольшие технические поправки.
5. В конце ссылки в круглых скобках указывается (in Russian). Ссылка готова.

Примеры транслитерации русскоязычных источников литературы для англоязычного блока статьи

Описание статьи из журнала

Krasovskiy G.N., Yegorova N.A., Bykov I.I. Methodology of harmonizing hygienic standards for water substances, and its application to improving sanitary water legislation. Vestnik RAMN. 2006; 4: 32-6 (in Russian).

Описание статьи из электронного журнала Белозеров Ю.М., Довгань М.И., Османов И.М., Шабельникова Е.И., Магомедова Ш.М. Трофотропное влияние карнитена у подростков с пролапсом митрального клапана и повышенной утомляемостью. 2011.

Образцы библиографического написания литературы

(ГОСТ Р 7.0.5--2008. Библиографическая ссылка. Общие требования и правила составления. М.: Стандартинформ. – 2008. – 19 с.)

Книги:

С одним автором

1. Воячек В. И. Основы оториноларингологии. – Л.: Медгиз, 1963. 348 с.

С двумя авторами

2. Блоцкий А. А., Плужников М.С. Феномен храпа и синдром обструктивного сонного апноэ. – СПб.: Спец. Лит., 2002. 176 с.

С тремя авторами

3. Преображенский Б. С., Тёмкин Я.С., Лихачёв А.Г. Болезни уха, горла и носа. М.: Медицина, 1968. 495 с.

Авторов больше трех

4. Основы аудиологии и слухопротезирования / В. Г. Базаров [и др.]. М.: Медицина, 1984. 252 с.

Статьи из журналов:

С одним автором

5. Борзов Е. В. Роль перинатальных факторов в формировании патологии плоточной миндалины. // Новости оторинолар. и логопатол. – 2002. – № 2. – С. 7–10.

С двумя авторами

6. Ковалева Л. М., Мефедовская Е.К. Этиология и патогенез сфеноидитов у детей. // Новости оторинолар. и логопатол. – 2002. – № 2. – С. 20–24.

Авторов больше трех

7. Vocal cord injection with autogenous fat: A long-term magnetic resonance imaging evaluation / J. H. Brandenburg [et al.]. // Laryngoscope. – 1996. – Vol. 106, N 2, pt. 1. – P. 174–180.

По тому же принципу цитируются статьи из сборников трудов и/или тезисов докладов.

Статьи из сборников:

8. Коробков Г. А. Темп речи. Современные проблемы физиологии и патологии речи: Сб. тр. Моск. НИИ уха горла и носа; Ленингр. НИИ уха, горла, носа и речи. М., 1989. Т. 23. С. 107–111.

Тезисы докладов:

9. Бабий А. И., Левашов М.М. Новый алгоритм нахождения кульминации экспериментального нистагма (миниметрия). 3 съезд оторинолар. Респ. Беларусь: Тез. докл. Мн., 1992. С. 68–70.

Авторефераты:

10. Петров С. М. Время реакции и слуховая адаптация в норме и при периферических поражениях слуха: автореф. дис. ... канд. мед. наук. СПб., 1993. 24 с.

Методические рекомендации:

11. Кузьмин Ю. И., Коробков Г.А. Оценка тяжести речевых нарушений при заикании: метод. рек. Л., 1991. 14 с.

Патентные документы:

12. Пат. 2187888 Российская Федерация, МПК7 Н 04 В 1/38, Н 04 J 13/00. Приемопередающее устройство / Чугаева В. И.; заявитель и патентообладатель Воронеж, науч.-ислед. ин-т связи — № 2000131736/09; заявл. 18. 12. 00; опубл. 20. 08. 02, Бюл. № 23 (Пч.). — 3 с.

13. Заявка 1095735 Российская Федерация, МПК7 В 64 G 1/00. Одноразовая ракета-носитель / Тернет Э. В. (США); заявитель Спейс Системз / Лорал, инк.; пат. поверенный Егорова Г. Б. — № 2000108705/28; заявл. 07. 04. 00; опубл. 10. 03. 01, Бюл. № 7 (1 ч.); приоритет 09. 04. 99, № 09/289, 037 (США). — 5 с.

14. А. с. 1007970 СССР, МПК3 В 25 J 15/00. Устройство для захвата неориентированных деталей типа валов / В. С. Ваулин, В. Г. Кемайкин (СССР). — № 3360585/25–08; заявл. 23. 11. 81; опубл. 30. 03. 83, Бюл. № 12. — 2 с.

РЕЦЕНЗИРОВАНИЕ

В рецензии освещаются следующие вопросы:

- а) соответствие содержания статьи заявленной в названии теме,
- б) соответствие современным достижениям науки,
- в) доступность читателям с точки зрения языка, стиля, расположения материала, наглядности таблиц, диаграмм, рисунков и формул,
- г) целесообразность публикации статьи с учетом ранее вышедших в свет публикаций,
- д) в чем конкретно заключаются положительные стороны, а также недостатки статьи, какие исправления и дополнения должны быть внесены автором.

Рецензент рекомендует с учетом исправления отмеченных недостатков или не рекомендует статью к публикации в журнале, входящем в Перечень ВАК.

Рецензии заверяются в порядке, установленном в учреждении, где работает рецензент.

Рецензирование проводится конфиденциально. Автору рецензируемой статьи предоставляется возможность ознакомиться с текстом рецензии. Нарушение конфиденциальности возможно только в случае заявления рецензента о недостоверности или фальсификации материалов, изложенных в статье.

Если в рецензии содержатся рекомендации по исправлению и доработке статьи, ответственный секретарь направляет автору текст рецензии с предложением учесть их при подготовке нового варианта статьи или аргументировано (частично или полностью) их опровергнуть. Доработанная (переработанная) автором статья повторно направляется на рецензирование.

Статья, не рекомендованная рецензентом к публикации, к повторному рассмотрению не принимается. Текст отрицательной рецензии направляется автору по электронной почте, факсом или обычной почтой.

Наличие положительной рецензии не является достаточным основанием для публикации статьи. Окончательное решение о целесообразности публикации принимается редколлегией журнала и фиксируется в протоколе заседания редколлегии.

После принятия редколлегией решения о допуске статьи к публикации, ответственный секретарь информирует об этом автора и указывает сроки публикации. Текст рецензии направляется автору по электронной почте, факсом или обычным почтовым отправлением.

Оригиналы рецензий хранятся в редколлегии или редакции в течение пяти лет.

INSTRUCTIONS TO AUTHORS

THE JOURNAL PURPOSES:

presentation of specialized information and clinical experience;
formation of modern clinical thinking;
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14.01.03 — ear, nose, throat diseases

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It would be helpful for some authors to read an excellent book that has been written for doctors whose first language is not English: "Writing Successfully in Science", M. O'Connor, Chapman & Hale, 1991, ISBN 041 446308.

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