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SIMPLE SNORING: DIODE LASER TREATMENT (MAIN POINTS OF THE LECTURE)

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Groupe Hospitalier La Pitié-Salpétriére - PARIS

A Simple Snoring needs before any decision a:

CHECK UP to precise personal and social consequences.

The interrogation of the patient and his partner explains the family background, as to how many times is the snoring, its intensity and frequency. We ask if there is troubles of sleep.

We have to eliminate an O.SA.S.:

On night symptoms: apneas, somnambulism, restless sleep, suffocation feeling, nycturia, enuresis.

On diurnal symptoms : early headache, non refreshing sleep, sleepness, impotence, libido troubles , memory troubles, depressive inclination.

We have to precise the ground:

Excess of weight
Alcohol, smoking
ENT or orthodontics antecedents
Oesophageal reflux
Soporifics, anti-depressants
Cardio-vascular, pneumologic pathologies

A complete medical examination :

precise cervico-facial and dental articulate structure
eliminate macro-glossia and precise naso-pharynx anatomy
naso-fibroscopy allows the retro-basal-lingual exploration

In front of suspicion of OSAS, we ask for a radiologic cephalometry and a sleep check.

PHVSIO-ANATOMY

When we speak of simple snoring, what is it ? The snorer sleeps:

Lying on his back: blood circulation reduces its speed, blood stagnates in venous lakes, and air passage becomes narrow.

When nose is passed through respiratory flow must cross over the velum to join bronchus.

In sleeping velum muscles are relaxed, the velum falls down like a flag which vibrates with respiratory wind:

The snorring is here.

GENERAL MEASURES

Loosing weight

Stopping hypnotics and sedatives drugs

Stopping tobacco and alcohol

These measures are important but rarely enough.

COUNTER INDICATIONS

Before treatment we have to eliminate:

inaccessible nasal cavities infection

coagulation troubles

high blood pressure

These counter indications can be treated

BIOPHYSICAL CONCEPTS

Diode Laser DORNIER

Emits at 940 Nm near infrared.

It is a laser with an electronic substrate (Aluminium-Gallium-Arsenide), it is a compilation of little transistors.

Diode beam

Is transported by an optical fibre which limits photons dissemination:

until 1.5 meters in open air

until 16 millimeters in a liver (1,5 watts, 15 minuts).

Diode effect is function of application mode: without contact realizing an hemispheric type with contact realizing a fan shaped

Diode Laser distributes heat uniformly, the result is a deep homogeneous molecular desintegration, following the crown of heat around the molecular desintegration scars with a retractile cicatrication.

Diode Laser DORNIER offers many functions, two are interesting here:

Standard mode to reduce tissue volume and oedema

Fibertom to cut

If tissue is reach of water it is better to begin in standard mode before using fibertom mode.

EQUIPMENT

Diode Laser DORNIER 940Nm

Fiber quartz 3 meters long, 600 micrometers diameter, covered with Teflon sheath.

Fibroscope : 4.9 millimeters diameter with a 2 millimeters operating channel for the fibre to treat nasal tissues.

Light source of 250 watts or better Xenon light source.

Imaging with a video camera fitted on endoscope, a video screen and a video recorder.

TECHNIQUE

On turbinates

On seated patient, under local anesthesia, with prior tamponade with naphazolinated 5% Lidocain during 20 minutes. We introduce the quartz fibre in operating channel of fibroscope :

in standard mode, we realize 1 or 2 stripes

with a power of 25 watts during 5 to 10 seconds on each side

in continuous shoot with a tangential irradiation.

3 sessions are necessary, 1 every 3 weeks to get a good nasal permeability.

On Velum

In seated patient, under local anesthesia with an injection of 1% Lidocain .

The shoot is parallel to the free border of posterior pilar of velum each side we draw 2 stripes like with a brush to provoke retraction and rigidity.On uvula, on each side of the foot we practice a pointing shoot to contract azygos muscle with a retractile scar: uvula gets shorter.

With a power of 25 watts in continuous shoot in contact standard mode.

2 to 6 sessions are necessary to archieve of results on each patient, every 3 weeks.

A too long uvula can be cut in mode Fiberotom.

COMPLICATIONS

rarely

- little hemorragia
- local secondary infection

often.:

- a reactional oedema needs 3 days corticoids.

NO PAIN .

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We have treated 544 patients since 1998:

75% of men

25% of women

in average age 53,9 years old.

The check up shows:

excess of weight: 29,2 %

rhinosinusal pathology: 27 %

with a medical treatment: 12,5 %

operated (UVPP, Septoplasty, Rhinoplasty, FESS): 14,6 %

Radiological check shows:

hypertrophic rhinitis: 41 % troubles of uvula or velum: 54 % normal: 41 %

DIODE LASER TREATMENT RESULTS

Criteria of evaluation

Interrogatory, examination, sleep check allow to evaluate: apneas and snoring intensity tiring and diurnal somnolence amelioration of physical performance

RESULTS

62,5 % Very Good (no snoring)

25% Good (less noisy, normal sleep)

these 87,5 % of patients are less tired when they awake, they have no diurnal somnolance get amelioration of sporting performances proved by sleep check.

8 % Failures

4 % non reevaluated

these 12,5 % are often fat, they refuse to be on diet or take tanquillizers.

CONCLUSION

Diode laser treatment of simple snoring gets 87,5 % of amelioration.

Diode Laser DORNIER 940 Nm is applied at an out-department practice without pain. The action of this Laser is in tissue depth where it induces retractile scar. This treatment can be adapted to each case.

The results are stable in time.

A BATTERY OF DIAGNOS TIC TESTS TO EVALUATE DENTAL AND ORL PATHO LOGIES

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Clinical and diagnostic data were correlated by applying a number of diagnostic tests including CT, polypositional digital X-ray using, if necessary, computer processing of X-ray images according to a standard protocol. In some cases panoramic zonography with digital image analysis was employed with densitometry. In “difficult” cases linear digital CT with transverse sectioning of the facial skull was found to be of diagnostic value. Whenever needed spiral CT and MRI with digital analysis and densitometry were as well very helpful.

This modern battery of diagnostic tests was the basis for reliable differentiating the type of pathology in dental region and paranasal sinuses. In the majority of cases inflammatory and degenerative changes in bone and adjacent soft tissues were dynamically observed in the process of treatment. Margins of the anatomy (surgical field) were of special interest. The tracking system was combined with endoscopy (rigid or flexible) to evaluate altered anatomy in the area of uncinatus process, optical nerve, anterior skull base structures, deviating arteries and their branching. Opacification of sinuses especially in the sphenoid due to neoplastic growths or purulent changes were efficiently judged. Profuse nasal polyposis preop with its spread and sinuses affection was demonstrated with the help of successive battery tests employed. Critically important was to define even slice thickness, periodontitis or cysts in the zone of frontal teeth, premolars or molars of the upper jaw. Basically, such pathologies as compression of the optical nerve and position of the bunch of sphenopalatine anteries, anterior sphenoid artery or fat protrusion into the nasal cavity at orbital decompression – all these situations were under control preoperatively which is of utmost importance for the subsequent surgery. In some cases of chondromas, aspergilosis, pyogenic granulomas, mucocele, craniofibromas or adenocarcinomas or SCC the battery of diagnostic tests was difficult to be overestimated.

STUDYING THE CONNECTION OF CYP1A1 GENE POLYMORPHISM WITH THE RISK OF LUNG CANCER.

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Abstract

MspI restriction fragment length polymorphism in cytochrome P -450 IA1 (CYP1A1) gene was studied in lung cancer patien ts. Apart from a standard control group of middle -aged healthy individuals additional control group of the elderly tumor -free individuals was involved into the study. All in all 146 lung cancer patients, 230 middle -aged healthy donors, and 259 elderly tu mor-free individuals were recruited.

CYP1A1/MspI genotypes and alleles distribution in population of St. Petersburg was similar to that in the Europeans and Caucasian Americans. Our data displayed that the presence of M2 allele was significantly associated with an increased risk for squamose cell lung cancer. Thus in patients with SCC this allele was present in 19 % that was by 8 % higher than in HD and the difference was statistically significant (F2=4.727, P=0.030).

In our study we confirmed the relatio n between MspI/CYP1A1 polymorphism and risk of squamose cell lung cancer. We also demonstrated the advantage of introducing the elderly tumor -free individuals as an additional control group in the epidemiological studies.

Keywords: CYP1A1, lung cancer, g enetic polymorphism, susceptibility, elderly donors.

INTRODUCTION

Lung cancer is one of the most frequent human neoplasms. Smoking has already been proved to be the main cause of lung cancer providing 80 % of all the cases. Nevertheless, not every smoker acquires the malignancy during the lifetime and this backs up the theory of individual susceptibility to lung cancer. The latter is apparently related to the several gene polymorphisms, which products metabolize tobacco smoke carcinogens. Due to interaction of the hereditary factors (gene polymorphisms) and environmental influence (tobacco smoke) lung cancer becomes an interesting model for studying the individual oncological predisposition.

Among the polymorphic genes that are possibly related to the individual susceptibility to lung cancer (LC) our attention was drawn to CYP1A1 gene from the cytochrome P450 enzymes superfamily. The gene product, aromatic hydrocarbon hydroxylase (AHH), metabolizes the polycyclic aromatic hydrocarbons (PAH), being one of the main components of tobacco smoke. Several allelic variants of the gene are known to be present at different frequencies among representatives of various ethnic groups (2). Thus C to A transversion in position 4887 leads to Thr to Asn substitution in the gene product (3). Separate polymorphisms have been detected in intron 7. Thus T to C transition in 5639 nucleotide is typical of African-Americans and the same replacement in position 6235 is evident at different frequencies in different ethnic groups (3, 4, 5). One base substitution of A with G in 4889 nucleotide of exon 7 leads to Ile o Val replacement in the heme-binding region of the enzyme. The two latter polymorphisms are in complete linkage with each other and associated experimentally with the increased catalytic activity of the rare enzyme.

The CYP1A1 MspI polymorphism drew investigators' attention after the research data obtained by Kawajiri had been published showing the increase of lung cancer risk in carriers of the mutant alleles of this gene (3, 7). The following investigations in Japanese population except the work of Kihara also revealed the susceptibility to lung cancer among the rare allele

carriers (8). However studies of this polymorphism in Europeans didn't reveal the increased risk of lung cancer (2, 3, 6, 9). The contradictory conclusions of different authors can be explained not only by the interracial differences but also by methodological problems with the choice of adequate control groups. As a rule, the control group in the epidemiological studies of that kind includes middle-aged people. It is worth mentioning, that the lifetime risk of cancer among women and men is 0.38 and 0.48, correspondingly. Thus there is a great number of potentially affected subjects among them. In this research in addition to the standard control group that consists of middle-aged subjects an ancillary control group, consisting of elderly subjects without any malignancies in the past, has been recruited. This group can be more effective control as elderly people aged 75 and older have already overcome the age of the highest cancer risk (10). This innovative approach has already helped us to obtain positive results in some research carried out in our institute.

Taking in consideration heterogeneity of the results of different authors, and absence of the corresponding data concerning the Russian population, we aimed our survey at studying CYP1A1/MspI polymorphism and its influence on the susceptibility to lung cancer among the citizens of St. Petersburg (11, 12).

MATERIALS AND METHODS

Lung cancer (LC) group involved 146 lung cancer patients who had been treated in N.N. Petrov Research Institute of Oncology from 1991 to 2000 (age range: 30-77, average age: 60 r 9). 230 middle-aged healthy donors (HD) (age range: 18–55, average age: 36 r11) were randomly selected among the volunteers of blood transfusion units located in N.N. Petrov Research Institute of Oncology and in City hospital #31. 259 elderly donors (ED) (age range: 75–92, average age: 83.5 r8.5) were recruited from the outpatient department of City hospital #31 and War veterans hospital. The absence of malignancies in anamnesis was confirmed by medical examination and analysis of the patient charts and history cases.

DNA genotyping

DNA was obtained from the peripheral leukocytes. DNA isolation was performed by a modification of the salt-chloroform method (13, 14).

CYP1A1 alleles

Genotyping for CYP1A1/MspI polymorphism was carried out by PCR amplification. DNA 10-100 ng was subjected to PCR amplification with primers 5' GGC TGA GCA ATC TGA CCC TA 3' and 5' ATA CCC CCC CCT CAC TCC AG 3'. PCR reaction mixture contained 1 x PCR buffer, 1.5 mM MgCl2, 200 PM of each dNTP, 1 PM of primers and 1 U Taq 1 polymerase in the total volume of 12 PL. Amplification was performed by 30 cycles of denaturation at 95C qfor 35 s, annealing at 58C qfor 60 s and extension at 72C qfor 60 s. A final extension at 72C qlasted for 7 minutes. A 221-bp fragment comprised polymorphous MspI site. Following the reaction MspI endonuclease, the buffer and water were added to the PCR product (3 PkL) and after 16-hour incubation the product was analyzed in 2.5% agarose gel.

Statistical analysis

P2 analysis and 95% CI was conducted for homogeneity to test for case-control differences in the distribution of the genotypes or other parameters under study. The authenticity of the differences was defined at 0.05% level.

RESULTS

The results of the genotyping are presented in picture 1.

m1 is a wild type allele where the MspI site is absent whereas a rare so-called mutant m2 allele has the polymorphous MspI site.

CYP1A1/MspI genotypes and alleles distribution among the elderly tumor-free donors, middle-aged healthy donors, and lung cancer patients grouped according to sex and smoking history

Groups	CYP1A1 genotypes(%)				CYP1A1 allels(%)		
	m1m1	m1m2	m2m2	Total	m1	m2	Total
Elderly donors (total)	206 (79)	51 (20)	2 (1)	259 (100)	463 (89)	55 (11)	518 (100)
Smokers (total)	84 (80)	21 (20)	0 (0)	105 (100)	189 (90)	21 (10)	210 (100)
men	74 (80)	19 (20)	0 (0)	93 (100)	167 (90)	19 (10)	186 (100)
women	10 (83)	2 (17)	0 (0)	12 (100)	22 (92)	2 (8)	24 (100)
Non-smokers (total)	113 (80)	28 (20)	1 (1)	142 (100)	254 (89)	30 (11)	284 (100)
men	34 (83)	7 (17)	0 (0)	41 (100)	75 (91)	7 (9)	82 (100)
women	79 (78)	21 (21)	1 (1)	101 (100)	179 (89)	23 (11)	202 (100)
Smoking history unknown (total)	9 (75)	2 (17)	1 (8)	12 (100)	20 (83)	4 (17)	24 (100)
men	4 (80)	0 (0)	1 (20)	5 (100)	8 (80)	2 (20)	10 (100)
women	5 (71)	2 (29)	0 (0)	7 (100)	12 (86)	2 (15)	14 (100)
TOTAL ELDERLY MEN	112 (81)	26 (19)	1 (1)	139 (100)	250 (90)	28 (10)	278 (100)
Total elderly women	94 (78)	25 (21)	1 (1)	120 (100)	213 (89)	27 (11)	240 (100)
Middle-aged donors (total)	181 (79)	47 (20)	2 (1)	230 (100)	409 (89)	51 (11)	460 (100)
Smokers (total)	107 (80)	26 (19)	1 (1)	134 (100)	240 (90)	28 (10)	268 (100)
men	54 (77)	15 (21)	1 (1)	70 (100)	123 (88)	17 (12)	140 (100)
women	53 (83)	11 (17)	0 (0)	64 (100)	117 (91)	11 (9)	128 (100)
Non-smokers (total)	54 (77)	15 (21)	1 (1)	70 (100)	123 (88)	17 (12)	140 (100)
men	17 (74)	5 (22)	1 (4)	23 (100)	39 (85)	7 (15)	46 (100)
women	37 (79)	10 (21)	0 (0)	47 (100)	84 (89)	10 (11)	94 (100)
Smoking history unknown (total)	20 (77)	6 (23)	0 (0)	26 (100)	46 (88)	6 (12)	52 (100)
men	9 (60)	6 (40)	0 (0)	15 (100)	24 (80)	6 (20)	30 (100)
women	11 (100)	0 (0)	0 (0)	11 (100)	22 (100)	0 (0)	22 (100)
TOTAL MIDDLE-AGED MEN	80 (74)	26 (24)	2 (2)	108 (100)	186 (86)	30 (14)	216 (100)
Total middle-aged women	101 (83)	21 (17)	0 (0)	122 (100)	223 (91)	21 (9)	244 (100)
Lung cancer patients (total)	107 (73)	37 (25)	2 (1)	146 (100)	251 (86)	41 (14)	292 (100)
Smokers (total)	90 (73)	32 (26)	2 (2)	124 (100)	212 (85)	36 (15)	248 (100)
men	86 (72)	31 (26)	2 (2)	119 (100)	203 (85)	35 (15)	238 (100)
women	4 (80)	1 (20)	0 (0)	5 (100)	9 (90)	1 (10)	10 (100)
Non-SCLC	71 (70)	28 (28)	2 (2)	101 (100)	170 (84)	32 (16)	202 (100)
SCC	46 (66)	22 (31)	2 (3)	70 (100)	114 (81)	26 (19)	140 (100)
adenocarcinoma	23 (85)	4 (15)	0 (0)	27 (100)	50 (93)	4 (7)	54 (100)
SCLC	14 (78)	4(22)	0 (0)	18 (100)	32 (89)	4 (11)	36 (100)
Non-smokers (total)	14 (78)	4 (22)	0 (0)	18 (100)	32 (89)	4 (11)	36 (100)
men	4 (80)	1 (20)	0 (0)	5 (100)	9 (90)	1 (10)	10 (100)
women	10 (77)	3 (23)	0 (0)	13 (100)	23 (88)	3 (12)	26 (100)
Age groups							
<=50	11 (85)	2 (15)	0 (0)	13 (100)	24 (92)	2 (8)	26 (100)
>50	96 (72)	35 (27)	2 (2)	133 (100)	227 (85)	39 (15)	266 (100)
Smoking history unknown (total)	3 (75)	1 (25)	0 (0)	4 (100)	7 (87.5)	1 (12.5)	8 (100)
Total lung cancer men	93 (73)	33 (26)	2 (2)	128 (100)	219 (86)	37 (14)	256 (100)
Total lung cancer women	14 (78)	4 (22)	0 (0)	18 (100)	32 (89)	4 (11)	36 (100)

Figure 1. Detection of CYP1A1 genotypes by PCR. Plasmid pUC19 subjected to MspI restriction enzyme digestion was used as a size marker. Marker fragments are shown on the left, base pairs (Lane M); Lane 1 – m1m2 heterozygous genotype; Lane 2 – homozygous site-absent genotype; Lane 3 – homozygous site present genotype.

The summarized data on CYP1A1/MspI genotypes and alleles distribution among LC, HD and ED are presented in table 1. Among the HD the frequency of the m1m1, m1m2 and m2m2 genotypes was 79%, 20% and 1% correspondingly that was similar to the figures obtained for Europeans and Caucasian Americans. When divided according to the allelic frequencies, a tendency to overrepresentation of the mutant alleles was revealed in men compared to women (χ^2=2.729, P=0.099). These differences in the allelic frequencies can not be explained by the prevalence of smokers among men, as the genotype and allelic frequencies among smokers and non-smokers not only among healthy donors but also between men and women didn't show any variation.

The frequencies of m1m1, m1m2 and m2m2 genotypes among ED were very similar to that in HD and were present in 79%, 20% and 1% correspondingly. Having compared the genotypes and alleles distribution between men and women, smokers and non-smokers, no variations were revealed.

The genotype m1m1, m1m2 and m2m2 frequencies among lung cancer patients were as follows: 73%, 25% and 1%. There was a small difference in genotype and allelic distribution in comparison with the both control groups (HD and ED). Taking into consideration the histological heterogeneity of lung cancer the analysis of the genotype and allele frequencies of CYP1A1 was carried out depending on the tumor type.

Comparison of the CYP1A1/MspI genotypes distribution between LC and HD has shown a tendency to overrepresentation of m1m2 genotype in patients with squamose cell lung cancer (SCC) (χ^2=3.498, P=0.065). Having compared the allelic frequencies between these groups, statistically significant difference was revealed (χ^2=4.727, P=0.030). Having compared SCC patients and ED, the difference became even more obvious: m1m2 genotype and m2 allele were present more often in SCC patients with the difference becoming more significant (χ^2=4.131, P=0.042 and χ^2=5.743, P=0.017 correspondingly).

On the contrary, the m1 wild type allele was more common in adenocarcinoma (AC) patients compared to the control groups (HD and ED). A predominant so-called wild

homozygote m1m1 was found by 12% higher in AC than in the overall lung cancer patients and by 6% higher than in HD and ED accordingly. m1m2 genotype was present by 10%, 5% and 5% more rarely in comparison with the above-mentioned groups correspondingly. m2m2 genotype was not found in patients with AC, although in HD and ED it was observed in 1%. However, there were no statistically significant differences between the groups. Apparently the result can be explained by the relatively small sample size (27 patients).

The genotype and allele distribution among the patients with small cell lung cancer (SCLC) was similar to that of the HD and ED.

DISCUSSION

Firstly, our study was aimed at assessing the frequencies of CYP1A1/MspI genotypes and alleles in population of St. Petersburg and evaluating its influence on lung cancer susceptibility.

Second objective was to demonstrate the advantage of implementing the elderly tumor-free donors as an additional control group in the epidemiological studies.

Our data has shown that the frequency of the rare m2 allele in HD (11%) was similar to that in Europeans and Caucasian Americans (3, 5, 6, 16).

Having analyzed the percentage of the genotypes and alleles, we have observed a 3% increase, although not statistically significant, of m2 rare allele in lung cancer patients compared to the both control groups (HD and ED). Considering the heterogeneity of lung cancer, the distribution of the genotypes and alleles was analyzed and appeared to be different in different lung cancer types. The distribution of the genotypes and alleles in patients with SCLC was similar to that in HD (m1m1–78%, m1m2–22%, m2m2–0%, and alleles m1–89%, m2–11%). In patients with AC the rare allele was less common than in HD and amounted to 7% and 11%, correspondingly although the difference was not significant (p=0.647). Apparently this can be explained by the relatively small sample size (27 patients).

Our data has displayed that the presence of m2 allele is significantly associated with an increased risk for SCC. Thus in patients with SCC this allele was present in 19% that was by 8% higher than in HD and the difference was statistically significant (F^2=4.727, P=0.030). The observed variations in the genotypes and alleles distribution among the patients with different lung cancer types may be linked to the different histogenesis of the tumors: adenocarcinoma arises from the alveolar epithelium and bronchial mucous glands, small cell lung cancer develops from cells of the APUD system, and squamose cell lung cancer originates from the bronchial ciliated epithelium. Probably various cell types have different sensitivity to tobacco smoke carcinogens.

The correlation between the presence of the mutant m2 allele and increased risk of SCC was demonstrated not only in this research but also in several other studies (2, 3, 6, 9, 16). A close association of lung cancer incidence with the presence of m2 homozygous rare allele was confirmed in the studies of Kawajiri K. et al.: in 151 LC patients m2m2 genotype was present in 21%, and in 11% in the group under control. In patients with SCC (105 cases) two copies of m2 allele were present in 23% (4, 7). The studies of Europeans and American Caucasians proved as well that the number of m2 allele carriers was larger in patients with SCC in comparison with the overall lung cancer group. Hirvonen et al. reported the frequency of m2 alleles in patients with lung cancer to be 8.1% and in patients with SCC 9.2% (9), and Drakoulis et al. 7.3% and 11% (6) correspondingly with the differences being statistically insignificant. Marchand et al. demonstrated the frequency of m2m2 genotype to be 10.3% in the overall lung cancer group and 20.3% in cases with SCC and revealed statistically significant difference between the m2m2 genotype frequencies in patients with SCC and the control group ($P<0.05$) (16). However, the other studies did not reveal any differences in the CYP1A1/MspI genotype distribution in lung cancer patients, including SCC. The findings of Kihara et al. vary from data obtained in the Japanese population. Among the smokers Kihara

observed m2m2 genotype in 17.8% individuals of the control group and in 16.5% in lung cancer patients (SCC and SCLC). At the same time m2m2 genotype was found in 11% in non-smoking controls. Taking into consideration the average age of the control group (50-69 years), we can assume that individuals with the increased risk of malignancies were present among the smoker.

Sugimura et al. (1994) investigated MspI polymorphism and its connection with LC in black and non-black citizens of Rio de Janeiro and didn't confirm the association of CYP1A1 genotypes and lung cancer susceptibility (17). It is of importance that it was the first examination of this polymorphism on the South American population. Noteworthy that the distribution of CYP1A1/MspI genotypes especially in non-blacks in Rio de Janeiro was more similar to that found in the Japanese healthy population than in the Northern American and European populations.

Shields et al. also obtained the results denying the association of the CYP1A1/MspI polymorphism and lung cancer susceptibility (15). They recruited 56 patients with lung cancer into the study. 31 patients with chronic obstructive pulmonary disease (COPD) or bronchial asthma and the history of more than 40 pack-years of tobacco smoking, and 15 patients with tumors other than lung or bladder cancer were referred to as controls. Being statistically insignificant, the relatively uncommon prevalence of the rare allele in the control group (19 %) in contrast with lung cancer cases (13 %) attracted our attention. One of the factors that may explain these results is the heterogeneity of the control group that included black and non-black individuals, women and men, as well as patients with COPD and malignancies.

Our results are in agreement with the literary data on the m2 allele prevalence among lung cancer patients. Moreover, we have found statistically significant difference for SCC compared to the data obtained in other European populations.

It is of interest that there was a tendency for differences between the middle-aged healthy men and women. As lung cancer morbidity is higher among men in comparison with women this fact confirms that the CYP1A1 mutation is related to the increased lung cancer risk. Comparison of the allele distribution between men and women among elderly donors did not reveal the difference. We suppose that it is connected with the ED group resistance to the neoplasms.

It is also worth mentioning that for the first time in the research of influence of CYP1A1 gene on lung cancer susceptibility the additional control group of elderly tumor-free individuals was introduced. In epidemiological studies this group can be more adequate control than middle-aged donors. As the peak of lung cancer morbidity is before 70 years, the additional control group of people aged 75 and older was formed. Thus the possibility that patients with malignancies were present in this group was very low. The similar approach was used in our institute to studying other gene polymorphisms.

In epidemiological studies such approach also allows to reveal the impact of this polymorphism on the lifetime. The genotype distribution among the control groups (HD and ED) did not differ from each other denying the influence of CYP1A1/MspI polymorphism on the lifetime.

Lung cancer is known to be most closely associated with cigarette smoking. In our study no difference was found between smoking and lung cancer susceptibility. Thus the frequency of m2 allele in smoking healthy donors and patients with lung cancer was 10% and 15% correspondingly. Moreover we didn't confirm the influence of this polymorphism on the lifetime of smokers. The literary data on the smoking habits and CYP1A1/MspI polymorphism are contradictive. Kawajiri et al. provide evidence that individuals with mutant alleles have a remarkably higher risk of lung cancer at a lower cigarette dose than those without the mutation. At the same time Sugimura et al. didn't show the increase of m2 alleles either in smoking patients with lung cancer, or in healthy smokers. Shields et al. also did not

reveal the association between the presence of CYP1A1 mutant alleles and smoking. According to their data in smokers with lifetime cigarette consumption less than 40 pack-years m2 allele was found in 24% in lung cancer patients and in 76% in healthy donors. In the groups with higher cigarette consumption (40-59 and >60 pack-years) the mutant alleles were found in 28% (LC) and 20% (HD), and 19% (LC) and 38% (HD) correspondingly.

Differences among the studies can be connected with the fact that ethnic groups with different frequencies of mutations in healthy population and thus different sensitivity to tobacco smoke carcinogens were analyzed. Therefore it is important to study combination of MspI and other CYP1A1 polymorphisms with polymorphous genes coding phase II enzymes. Kihara et al. came to the conclusion that apparently the important factor that plays a role in pathogenesis of lung cancer is not a presence of m2 allele but a combination of the different so called "susceptible" alleles of the genes that encode phase I and II enzymes of xenobiotic metabolism. Thus the increased cigarette consumption in individuals with combined GST P null and CYP1A1 (m2m2) genotypes leads to an increased risk of lung cancer (8).

Firstly, our data has shown that distribution of CYP1A1/MspI genotypes and alleles in population of St. Petersburg is similar to that in the Europeans and Caucasian Americans. Secondly, the connection between the CYP1A1/MspI genetic polymorphism and risk of SCC was revealed.

Thirdly, we demonstrated the advantage of introducing the elderly donors as additional control group in epidemiological studies.

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ORIGINAL ARTICLES

ESSENTIALS OF LASER SURGERY IN OTORHINOLARYNGOLOGY. (A BRIEF OVERVIEW OF RUSSIAN EXPERIENCE IN CONTACT LASER APPLIC ATION)

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Laser surgery in otolaryngology originated at the beginning of the seventies last century. Nowadays it has become quite evident that the aforementioned trend in ORL occupies an important position among the other surgical techniques in the speciality. Historically, carbon-dioxide laser was dominating at first. However, last decade new types of lasers appeared to produce emission easily transmitted via fiberoptics (Nd:YAG, KTP, diode lasers, etc). Further perfection and developments in endoscopic surgery are associated with these types of lasers. Moreover, “contact” technique of surgery with fiberoptic gave an impulse to the rise of new surgical perspectives, among them, laser interstitial thermotherapy (LITT) being one of the most promising.

Laser surgery in laryngology plays the central role in the speciality. As a rule, all the surgical interventions in the field are made under intravenous general anaesthesia and artificial ventilation of the lungs using direct suspension microlaryngoscopy. It may not be out of the place here to mention, not dwelling on the details of narcosis induction and maintenance, that the artificial ventilation of the lungs may be achieved via intubation of the larynx or trachea with laryngoscopes with ventilation channel as well as by thin ventilation tubes or catheters via tracheopuncture. My Clinic gives preference to the latter technique. For the last 12 years 463 tracheo-and/or conicopunctures were performed to provide high-frequency ventilation of the lungs at endolaryngeal laser operations. The catheter was placed according to Seldinger [1]. Transcutaneous transtracheal catherization possesses, to our opinion, undoubtful advantages when making laser surgery of the larynx. Tracheopuncture is performed in no time and is easily tolerated by the patients. In these conditions apnoe period does not occur to be inevitable in orotracheal intubation, which makes the transition period from spontaneous breathing towards artificial respiration more physiological. The potentiality to preserve catheter in the trachea at the early postop period with no inconveniencies to the patient and without limitations of his/her mobile activity makes it possible, if necessary, to resume the ventilation without reintubation. Absence of the catheter in the operation field when using transcutaneous tracheopuncture provides for maximal possible safety of the operation zone, gives the necessary freedom for surgical maneuvers and excludes entirely an emergencies of accidental ignition of the catheter by high-energy laser (Fig.1f). Air flow coming out of the lungs keeps the blood, debris and plumes from entering the tracheo-bronchial tree. Moreover, it creates a beautiful visualization of the larynx during surgery by constant drainage of the plumes out of the operating field. When pathologies localized on the vocal cords or in the vestibule conicopuncture was made whereas tracheopuncture was more suitable when subglottis was involved. Tracheopuncture is proceeded under local anaesthesia in the supine position of the patient with a pillow under shoulders. The skin and soft tissues are punctured in the midline of the neck. The trachea is pierced in the intercartilagenous

space. The correct position of the needle tip is tested with syringe filled with lidocaine solution: if the tip of the needle is in the tracheal lumen air bubbles appear in the syringe when its piston is gently pulled up. After that lidocaine is instilled through the needle into the tracheal lumen to suppress coughing. Tracheal catherization as a procedure is being

Fig. 1. Consecutive stages of tracheopuncture/conicopuncture performance:
a/ needle puncture of the trachea under local anaesthesia;
b. syringe testing of the correct needle tip position in the tracheal lumen;
c. plastic conductor is being inserted through the needle;
d. the needle has been removed and the polyethelene catheter is introduced via conductor as a guide;
e. the catheter is finally positioned in trachea and fixed to the skin. After that the catheter is connected to the jet-ventilator and high-frequency ventilation starts;
f. A thin, 1.2mm diameter catheter is positioned in subglottis (conicopuncture).

immediately started after this stage. With this in view a rigid conductor is inserted via the tracheal needle and the latter is removed. After that follows the insertion of the catheter which is guided into the tracheal lumen via the conductor (Fig.1a-e).

The catheter is placed in the trachea in such a way that its tip is located over bifurcation to provide proper ventilation of the both main bronchi. The outer outlet of the catheter is being connected with jet-ventilation apparatus and artificial respiration starts (Fig.2). According to the above technique, conicopuncture was performed in 223 (48%) cases and tracheopuncture – in 240 (52%) patients in our Clinic (Fig.3).

Fig.2. High-frequency ventilation set: upper part - ventilation apparatus; lower part - device for air humidification connected by a tube with the ventilation apparatus; in the middle - cardiomonitor.

Our experience proved that from the ergonomic point of view “contact” technique of laser surgery is the most advantageous in otorhinolaryngology, especially, in laryngology. Its essence consists in bringing the tip of the fiberoptic carrying laser energy into direct contact with the tissue to be excised. No marker system is needed at all in these conditions whereas it is absolutely necessary when navigating the “distant” laser beam to the target. The emission is switched on only at the moment when a surgeon plunges the quartz rod into the tissue to be ablated,

Fig.3. General view of the operation room for laser surgery. All the equipment including surgical microscope, jet-ventilator, laser apparatus, etc produced in Russia.

therefore, no off-the-target hits are possible. The surgical procedure itself is much simpler because fiberoptic can be slightly bent, but quite sufficiently “to pass round” the pathological focus, that is, the angle of laser hitting can be arbitrarily changed which is never possible in “distant” laser application due to the directness of the light spreading. Thus, greater radicalism is achieved during surgery. The tissues, as a rule, are excised, but not evaporated which produces less pluming in the zone of surgery. Experimental investigations have shown that the tissue damage is confined to the diameter of the fiber tip (200-400 micrometers) and is represented as carbonization zone surrounded by a thin layer of coagulation within several rows of adjacent cells [2]. As regards its principal meaning the method described strictly corresponds to one’s idea of a scalpel effect on tissues and can be roughly compared with the biological effect of carbon dioxide laser. Biological properties of the contact method are as follows: limited damage beyond the contact area, no oedema, fast healing, no or slight cicatrication, no bleeding and, consequently, “dry” operating field. Besides, the contact technique is very handy to be used in anatomical zones difficult for surgical access, in particular, anterior comissure of the larynx. Fiberoptic with laser beam is placed into a miniature tube which serves at the same time as a manipulator which can be applied to pull the structures apart wherever necessary. The distal end of the manipulator containing fiberoptic can be bent to a certain degree (Fig.4). This simple, but expedient maneuver is sometimes invaluable when combined with external pressure on the larynx by an assistant at surgery to create a clear view of the anterior laryngeal commissure, the favorite seat of neoplasms.

Fig.4. Hand-piece for nasal surgery (see: fiberoptic is inside the tube slightly protruding from the outlet. The tube is somewhat bent.

Analysis of the literature as well as our personal experience point to the significance of laser in laryngology where laser surgery might be righteously regarded as a real “breakthrough”. Laser is precisely the tool which made endoscopic laryngeal cancer surgery a success. There is a chance left for the traditional surgery to compete with laser surgery in benign growths removal in the larynx while cancer of the larynx, juvenile papillomatosis and laryngeal cicatrications stand apart from any comparison with routine surgical procedures.

Juvenile laryngeal papillomatosis is notorious for its frequent papillomata recurrences in spite if any modern antivirus treatments. The only way, therefore, to preserve patency of the respiratory airway remains, therefore, surgery. Recently habitual approach to use forceps in direct laryngoscopy would inevitably cause injury to basilar membrane and subepithelial layer leading to postop endolaryngeal cicatrication. In some cases laryngeal scarring grows into the major problem in the clinical history of a patient suffering a lot to become a constant cannula-bearer. It might be also pertinent to note a high disposition of papillomata towards bleeding. Even gentle touching of the friable papillomata masses causes immediate haemorragic reaction. The arising bleeding ultimately obscures the operating field to such an extent that the surgeon is forced to waste much of his efforts to control it. Laser surgery of the laryngeal papillomatosis, on the contrary, quite another technique, absolutely bloodless, sparing and precisional. Especially beneficial for the both – the patient and the surgeon is the laser interstitial thermotherapy (LITT) when applied in laryngeal papillomatosis. It provides not only clean, free from the bleeding laryngeal field of surgery, but ensures also no traumatization with recovery without scarring. It should be pointed out hereby that LITT came into existence only thanks to previous developments in laser contact technique.

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RESUME
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Authors was introduced on MR imaging technique of the oropharynx structures in 44 patients with phenomenon of snore and obstructive sleep apnea before and after uvulopalatoplasty. MR images depicted decrease of volume of the soft palate on 29%, rise of volume of the oropharynx on 27%, rise of area of transverse section of airway in 2,7 once.

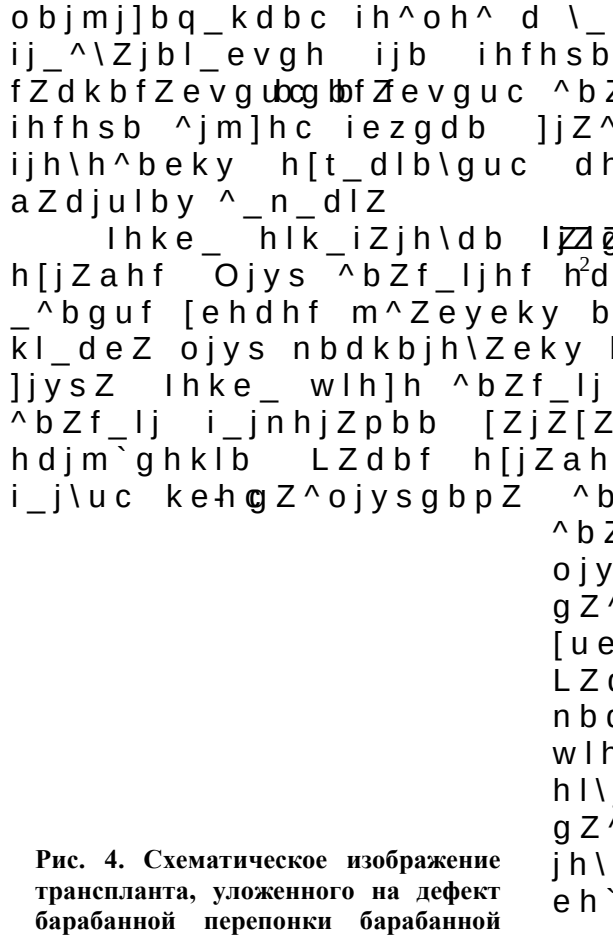

Рис. 4. Схематическое изображение трансплантата, уложенного на дефект барабанной перепонки барабанной перепонки

Рис. 5.

]h hlkmlkl\by jZ^gy\ ih- ihlj[ghklb \ moh \\h^behkv hdhe
khedhk_jbeh\h]h]_ey

H[uqgh i_j\u_ ijbagZdb gZqZeZ iblZgby ljZgkieZglZlZ hlu
djZ_\h]h ihjhah_gby ljZgfkhieZgqZlZc]bi_j_fbb hdjm`Zxs_c [ZjZ
i_j_ihgdb ijb fbdjhkdhibq_kdhf hkfhlj_ gZ[ex^Zehkv jZkrb
>Zggu_ ijbagZdb ihy\eyebkv-7-_ kkjm^lgbfihgZe_ Zmlhljzgkieglzp
ihke_hi_jZpbhgghf i_jbh^_ gZagZqZeb Zhgbihbfzbedhc kip_^fgbah
ZgZev]_lbdb GZ kmldb ijb]eZ^dhf l_q_gbb ihke_hi_j
i_j_\h^beb [hevguo gZ ^g_\ghc klZkmlhdbZjubbkZ\Zeb

Hkh[_gghklvx khklhygby g_hlbfiZgZevghc f_f[jZgu ihk
eZa_jghc fbjbg]hieZklhdb kqeblZlv kdm^gh_ dhebq_kl\h
ihke_hi_jZpbhggh]h ljZgkkm^ZlZ >Zgguc wnn_dl fh`gh [u
l_jfbghf ©kmoh_ eZa_jgh_ moh ª

< ^h b ihke_hi_jZpbhgghf i_jbh^_ ijh\h^beb nhlh^hd
dhfivxl_jgmx lhfh]jZnbx \bkhqguo dZhk^lbehdeblqkdh- bkke_^h\
kemoZ h[uqguc dhfie_dk debgbq_kdbo ZgZebah\

Hl^Ze_ggu_ j_amevlZlu [he__ f_k ihdZaZeb klhcd
g_hlbfiZgZevghc f_f[jZgu \h \k_o]jmiiZo memqr_gb_ kemoZ n
dZdhc eb[h ^hihegbl_ebvbhkhiZklhejhgu kj_^g_]h moZ ihke_
^_n_dlZ ljZgkieZglZlhf Q_j_a f_kyp_\ ihke_ \hkklZgh\e
[ZjZ[Zgghc i_j_ihgdb ijh\h^beb-lhdhfjZvxbqjgkdh_ bkke_^h\Zg
ihehklb kj_^g_]h moZ GbdZdbo iZlheh]bq_kdbo ihe[jZlbh\Zgbc
ZgljZevghc de_ld_ b de_ldZbjhkkhkpZ_vb^gZ[ex^Zehkv

Hl^Ze_ggu_ j_amevlZlu k\ur_]h^Z gZjy^m k \ukhdhc
eZa_jghc fbjbg]hieZklbdb \uy\beb jy^ g_^hklZldh\ ^Zggh]h kih

<hi_j\uo \ k\yab kh kdm^hklvxm^dZZg_ihkje_wjlkk_kkZ k\Zj
nhjfbjh\ZeZkv [he__ jb]b^gZy g_hlbfiZgZevgZy f_f[jZgZ q_f
kihkh[_

<h\lhjuo ijb lhq_qghf ijb\Zjb\Zgbb ljZgkieZglZlZ \
\ha^_ckl\by eZa_jgh]h emqZ \hdjm] nhdmkZ \ha^_ckl\
ihgb`_ggh]h iblZgby ljZgkieZglZlZ ?keb lZdbo lhq_d [ueh
ihgb`_ggh]h iblZgby gZdeZ^u\Zebkv ^jm] gZ ^jm]Z \ kh\hc
mom^rZeb iblZgb_ ljZgkieZglZlZ < wlhf k_l_ _kvfZ khfg
eZa_jghc fbjbg]hieZklbdb /DjWnhZbVhc\ ]^_ bkihevam_lky g_i
k\Zjdhc rh\ Q_j_a]h^ ihke_ ljZgkieZglZpbb ijb fgh]hlhc
\ha^_ckl\bb g_hlbfiZgZevgZy f_f[jZgZ ijbh[j_lZeZ \b^]b
[ZjZ[Zgghc i_j_ihgdb >ey mkljZg_gby wlh]h g_Zfdbo\mZhlvh y\e_
dhebq_kl\h lhq_d eZa_jgh]h \ha^_ckl\by ^h ^\mo Wlh]h hdZaZ
qlh[u gZ^_`gh nbdkbjh\Zlv ljZgkieZglZl d i_j_ihgd_ g_ mor
iblZgby

<lj_lvbo ijb bkihevah\Zgbb nZkpbZevguo-ljZfgkiyepZglZlh\
fubgh]^Z h[gZjm`b\Zeb f_edb_ lhq_qgu_ i_jnhjZpbb \ f_klZo \h
emqZ

ljh_^_gb_ eZa_jghc fbjbg]hieZklbdb ijb lhlZevguo ^_n
i_j_ihgdb hdZaZehkv g_wnn_dlb\guf \ke_^kl\b_ hlkmlkl\by
ijb\Zjb\Zgby ih^e_`Z\sh_ccihdZjo_ghklb

ljb km[lhlZevguo ^_n_dlZo gZb[he__ wnn_dlb\guf hdZa
^\mokehcgh]-hgZ^yosjysbqgh]h ljZgkieZglZlZ b ^\molhq_qgZy eZa
GZb[he__ i_jki_dlb\ghc b m^Zqghc eZa_jgZy fbjbg]hieZ
g_[hevrbo pvgujZei_jnhjZpbyo \ Zki_dl_ ©objmj]bb h^gh]h ^g
nhjf_ fbjbg]hieZklbdm fh`gh ij_h[jZah\Zlv \ Zf[meZlhjgh_

Zf[meZlhjgh_ objmj]bq_kdh_ \f_rZl_evkl\h =ZjZglhf gZ^_`
[eZ]hihemqgh]h ihke_hi_jZpbhggh]hnbdjkZ\pZy\ZkmhlZZgkieZglZ
iml_f k\Zjb\Zgby ldZg_c ljb h[uqghc fbjbg]hieZklbd_ wlh]h ^
lZd dZd hkms_kl\ey_lky k\h[h^gZy mdeZ^dZ i_j_kZ`b\Z_fhc l
ljb qboZgbb kfhjdZgbb k\h[h^guc ljZgkieZglZl fhk`_lkihegh
jZg_\uf eh`_ b \ ihke_^mxs_f Zmlhebabjh\Zlvky ljb eZa_jgl
g_]Zlb\guc fhf_gl bkdexq_g lZd dZd ldZgb ljZgkieZglZlZ b
f_`^m kh[hc

Lj_[h\Zgby d ij_^hi_jZpbhgghfm i_jbh^m lZd`_ dZd ijl
fbjbg]hieZk-bhdlkmlkl\b_ \u^_e_gbc ba moZ \ l_q-_gb_kihke_^m
KZgbjh\Zgby ghkh]ehldb ohjhrZy ijhoh^bfhklv kemoh\hc lj
ihke_hi_jZpbhggh]h i_jbh^Z ke_^m_l kqblZlv ihgb`_ggh_ d
ljZgkkm^ZlZ g_h[oh^bfh]h ^ey idZZgbWlhljZgkieZglZ objmj]Z
\j_fy i_j_\yahd bkihevah\Zgby ^hihegbl_evguo e_dZjkl_gguo
j_]_g_jZpbx ldZg_c b bo ijb`b\e_gb_

Ijhklhl Z ^hklmighklv [_ahiZkghklv b gZ^_`ghklv eZ
\hkklZgh\e_gby p_ehklghklb [ZgZbZgbchejl_li j_dhf_g^h\Zlv _
bkihevah\gZbx d rbjhdhc debgbq_kdhc ijZdlbd_

Резюме

Лазерную миринготластику можно считать одним из полноправных направлений современной отохирургии. После изучения отдаленных последствий нового способа восстановления целостности барабанной перепонки определились показания и противопоказания к его использованию.

Наиболее перспективно его применение оказалось для реализации концепции хирургии «одного дня». Благодаря простоте, надежности, безопасности и доступности возможно ее применение в амбулаторных условиях.

Литература

1. ;ZjZgh\ < l leZklbdZ h[rbjgh]h ^_n_dlZ [ZjZ[Zgghc i_j_ihgdb Zeehlj
fha]h\hc h[hehqdb <_klgbd hlh-jbg-<e-Kbg]heh]bb
2. ;Zd_j O B F Dehbjmbdlm]bq_kdh_ h[kjbg\Zgbe_Zklbdb k ihfhsvx eZa_jgh
k\Zjdb >bkk« dZg^kl[^ gZ-mdK
3. Dbg L B Fbjbg]hieZklbdZ lj_okehcguf ljZgkieZglZlhf m [hevguo ojh
kj_^gbf hlblhf :\lhj_n >bk«dZgZkg^yjZdmd k
4. Hkljh\kdbc B Bh\kdhkcj : B LbfiZghieZklbdZ ijh[e_fu b j_ZebaZpby
2000. - < - K -10.
5. lZlydbgZ H D Jy[bgZ < l KjZ\gbl_evgZy hp_gdZ ZmlhljZgkieZglZ
aZdjulbyo kmobo ^_n_dlh\ [ZjZ[Zgghc i_j_ihgdb <1975. < 3-lhjbgheZjb
K – 34.
6. Kblgbdh\ < l F_lh^u ih\ur_gby wnn_dlb\ghklb lbfiZghieZklbd
hlhjbgheZjbg]hehjbkkbb L_Fabg^hdle- K – 58.

СЛУЧАЙ ИЗ ПРАКТИКИ

E:L?GLGUC I:J:N:JB?G:EVGUC :;KP?KK LJM>G:Y >B:=GHKLBD:

DZji_gdh : < RZogZaZjkhidh H G
DZn_^jZ hlhjbgheZjbg]heh]bb
Kl;=FM bf ZdZ^ B I lZ\eh\Z

lh^ l_jfbghf h[t_fgu_ h[jZah\Zgby r_b ih^jZamf_\Z_lky ijhp_kk ijhy\eyxsbcky baf_g_gb_f h[t_fZ b beb dhgkbkl_gpb r_b

>bnn_j_gpbZevgZy Z^hZ[tghkubdh[jZah\Zgbc r_b kqblZ_lky gZb[he__ keh`guo ^bZ]ghklbq_kdbo ijh[e_f Wlh k\yaZgh k h r_b ]^_ gZ g_[hevrhf h[t_f_ dhfiZdlgh jZkiheh`_gu hj]Zgu \ hj]ZgbafZ ^uoZl_evghc g_j\ghc khkme^bvklgch ibs_\ZjblZ fgh]hh[jZab_f bo iZlheh]bb

Kms_kl\mxl jZaebqgu_ \a]ey^u gZ deZkkbnbdZpbx h[t_fgu h[s_ijbagZgghc gZ k_]h^gyrgbc ^_gv g_ kms_kl\m_l

GZb[he__ qZklh \klj_qZxsb_ky h[t_fgu_ h[jZah\Z kbkl_fZlbabjh\Zlv kh]eZkijhgZ]Zg`ghklb he[_^amxfsbf

- lZlheh]by ebfnZlbq_kdbo maeh\ ebfnZ^_ghiZlbb jZaeb
- lZlheh]by sblh\b^ghc `_e_au gh\hh[jZah\Zgby lbj_hb^
- lZlheh]by kexgguo `_e_a gh\hh[jZah\Zgby kbZeZ^_gb [he_agv dbZkehaukb
- <g_hj]ZggZy iZlhehjZ]gu_ himoheb dbklu \hkiZe_gby

Hkgh\gu_ f_lh^u ^bZ]ghklbdb h[t_fguo h[jZah\Zgbc debgbq_kdh]h bkke_^h\Zgby fh`gh ih^jZa^_eblv gZ j_gl]_gh]jZnby MAB DL kpbglbjZahgZkhZ]jZnby ihabljhgvfhkkbhggZy lhfh]jZnby fhjnheh]bq_kdb_]bklh pblheh]bq_kdh_ bkke_^h\Zgb_ b \kihfh]ZlRvevgu_ jkZjdhebh]bq_ FZglm eZ[hjZlhjgu_ debgbq_kdbc ZgZeba djh\b b l ^

<Zr_fm \gbfZgbx ij_^klZ\ey_kdybcdekbemqZc [hevghc B ihklm\r_c \ debgbdm hlhjbgheZjbg]heh]bb B kl[=Z\ehbZ ZdZ^ ghy[jy] k `Zeh[Zfb gZ [heb \ aZluehqghc h[eZklb baf_g aZljm^g_gb_ ^uoZgby qm\kl\h g_m^h[kl\Z b [hevhjhjbg]hlZgb l_eZ \ ]ehld_ ihgb`_gb_ Zii_lblZ

< ZgZfg_a_ m [hevghc lhgabeewdlhfby \ ^_lkl_

KqblZ_l k_[y [hevghc \ l_q_gb_]h^Z dh]^Z jh^kl_gg hlf_qZlv baf_g_gby]hehkZ Mom^r_gb_ khklhygby k k_gly[jy HJ<B hmslbeZ ih^\b`gh_ bghjh^gh_ l_eh \ ]ehld_ [he_ag_gg E_qbeZkv kZfhklhyl_evgh d \jZqm g_ h[jZsZeZkv

< k_j_^bg_ hdly[jy]h^Z kbfilhfu klZeb gZjZklZlv]gmkZ\hklv ihy\bebkv dhexsb_ [heb \ e_\hc ihZehvlZgbbjhdZ]eh r__ h[gZjm`beZ iehlgh_ h[jZah\Zgb_ ^bZf_ljhf hdheh kZglbf a__ \uy\beZ ZkbfhlZsjbx khklhygb_ [hevghc [ueh m^h\e_l\hj l_fi_jZlmjZ l_eZ g_ ih\urZeZkv

>h ihklmie_gby \ gZrm debgbdm h[ke_^hlZmeZjkv`^\_gbc_ e ]hjh^Z hkfhlj_ghZgdEhl]hf \ j_amevlZl_ mklZgh\e_gu ij_^\ ^bZ]ghau g_oh^`dbgkdZy ebfnhfZ gh\hh[jZah\Zgb_ iZ ijhkljZgkl\Z

Ijb ihklmie_gbb \ debgbdm ijhba_^_gh ^hh[ke_^h\Zgb_ iZ
Ijb hkfhlj_ hij_^v_ey\eh\k_jog_c lj_lb db\Zl_evghc furpu
iZevibjh\Zehkv wieZgkh-bq_kdh_ ljm^gh kf_sZ_fh_ h[jZah\Zgb
hdheho kZglbf_ljh\ dh`Z gZ^ gbf g_ baf_g_gZ

NZjbg]hkdhibqZ_kdf_ljby a_\Z aZ kq_
\u[moZgby [hdh\hc qZklbqgheh\dZ^kec\Zl_gd
km`b\Zxs__ ijhk_l]ehldb [he__ q_f gZihe
mjh\g_ jhlh]ehldb b kimkdZx-s_\ky \gb
]hjlZgh]ehldb ijhbabklZy ihdju\ZxsZy h[jZah\Z
jhah\Zy g_baf_jhg_ggZy

Ijb [bfZgmZevghc iZ[jZah\Zgb_ iehlgh-
weeZklbq_kdhc dhgkbkl_gpbb kebabklZy
kf_rZ_lky

Ijb g_ijyfhc eZjbg]hkdhibb \oh^ \ ]hjlZg
ijbdjul h[jZah\Zgb_f Q_jiZeZ^hjdZjgZeh-
kdeZ^db kijZ\Z g_ baf_g_gu ke_\Z g_
=hehkh\u_ kdeZ^db ijb nhgZpbb kfudZxlky ih

Рис.1. Фарингоскопическая картина

< debgbq_kdhaf_ZgjZeb h[jZsZeh gZ k_[y \gbfZgb_ lhevdh
KHW^h - ff q
lh ^Zgguf bgkljmf_glZevgh]h h[ke_^h\Zgby

MAB r_k _jogbo
hl^_eZo iZjZnZjbg]_Zevgh
ijhkljZgkl\Z hij_^_ey_lky
]bihwoh]_ggh_ h[jZah\Zg
g_ijZ\bevghc nhjfu
jZaf_jZfb ^h fo
ijbe_`Zs__ d \gmlj_gg_c "
khgghc Zjl_jbb bYgmljb b
nZkpbb r_b H[jZah\Zgb
jZkiheh`_gh hl mjh\gy
[bnmjdZpbb h[s_c khggh

Рис.2. Данные ультразвукового исследования шеи

Zjl_jbb ^h _jogbo hl^_eh\ iZjZnZjbg]_Zevgh]h ijhkljZgkl\Z gZ
`_e_ajubk .

Dhfixl_jgZy lhfh]jZhjby kbjZevghc lhfh]jZnbb-edp_e\khlogh
h[eZklb k ihke_^mxsbf ijh_^_gb_f bkke_^h\Zgby \ mkeh\
dhgljZklgh]h mkbe_gby mjh]jZfebg b ihkljh_gb_f j_nhjfZpb
bah[jZ`_gby \ iZjZnZjbg]_Zevghc h[eZklb ke_\Z hij_^_ey
fy]dldZghc iehlghklb g_h^ghjh^ghc kljmdlmju hl^Z\eb\Zxs__
ghkh]ehldb fy]dh]h g_[Z di_j_^b QZklbqgh khojZgy_lky iZjZ
ijhkehcdZ JZaf_ju gh\hh[jZah\Zgby khklZ\eyxl a o o k
DhgljZklgh_ _s_kl\h gZdZieb\Z_lky h[jZah\Zgb_f \ f_gvr_
g_baf_g_ggZy kebabklZy EbfnZlbq_kdb_ maeu \ ahg_ kdZg
Dhklguo ^_kljmdlb\guo baf_g_gbc \ ahg_ kdjZkbjh\Zgby g_ \uy

Рис.3. КТ-картина внеорганного образования парафарингеального пространства слева.

FZ]gblgih-ahgZgkgZy lhfhGZZkbjbb FJ lhfhjjZdfof ldZg_c
r_b \ ZdkbZevghc b djZgbZevghc ijh_dpbyo h[jZsZ_l gZ k_[y
km`_gb_ ijhk_lZ jhlh]ehldb aZ kq_l ^hdhjhZbbdhglmjaZ^ke-\Z
mjh\gy q-jgZehjlZgguo k\yahd kgbam ^h m]eZ gb`g_c q_exkl
]ehldb ^_nhjfbjh\Zg h[t_fguf h[jZah\Zgb_f jZkiheh`_gguf iZ
bf_xs_f q_ldb_ jh\gu_ dhglmju h\Zevgmx nhjfm jZaf_jhf
MdZaZggh_ h[jZah\Zgb_ khklhbl ba ^\mo l_kgh ijbe_`Zsb
jZkiheh`_gguc bf__l bahbgjZdkbjhgkl_bdboZkb]gZeZ fy]dhldZ
iehlghklv \lhjhc ma_e [he__ djmiguc \ gb`gbo _]h hl^_eZo
khhl_lkl\m_l fy]dhldZghc Z \ _jog_f hl^_e_ bf__lky `b^d
H[jZah\Zgb_ ijbe_`bl d khkm^bklhfm imqdm yke_]hZ ijhk_lhevdh
khkm^h\ g_ ^_nhjfbjh\Zgu ljhk_l ljZo_b k\h[h^_g Khklhygb_
hkh[_gghkl_c <bamZebabjm_fu_ kexggu_ `_e_au h[uqghc b
Sblh\b^gZy `_e_aZ k q_ldbfb dhglmjZfb m[_^bl_evguo ^Z
baf_g_gbyk\ljmdlmj_ g_ iHhiejm^q_egyhxlky _^bgbqgexklghu^qe maeu
kijZ\Z ^h kf jbk

Рис.4. Результаты магнитно-резонансного исследования в различных режимах

Ih ^ZggMfAB [jxrghc ihejhkl,_gheh]bq_kdh]h bkke_^h\Zgby
]jm^ghc de_ldb iZlheh]bq_kdbo baf_g_gbc g_ \uy\e_gh

Ijb hkfhlj_ g_\jheh]hf \hagbdeh ih^haj_gb_ gZ gZebq
i_jbn_jbq_kdbo ihjZX_ggbci-fha]h\uo g_j\h\ ke_\Z

GZ hi_jZpbb
l_j\uf wlZihf \uiheg_gZ gb`gyy ljZo_hklhfby
JZaj_a ih _jog_c dh`ghc kdeZ^d_ hlk_iZjh\Zg gb`gb
fh[bebah\ZgZ db\Zl_evgZy furpZ -\u_j\eug khqm^bklb hl^_evg
_gZ b h[sZy Zhlgjy < _jog_c lj_lb db\Zl_evghc furpu
ebfnhmd_se kf < iZjZnZjbg]_Zevghc h[eZklb h[gZjm`_gZ ie
dZikmeZ gh\hh[jZah\Zgby ljb __ \u^_e_gbb \ h[eZklb _jog_

\kdjulZ ihke_ q_]h \ jZgm \uh^_edbeehkq_[hehv ^h fe]mk
bohjhagh]h]ghy jbk

Рис.5. Этап жирургического вмешательства

ljhba_^_gh rbjhdh_ \kdjulb_ ihehklb Z[kp_kkZ ihe
Zglbk_ilbdZfb ljb j_\babb ^_n_dlh\ kebabklhc h[gZjm`_gh g_
mrblZj_gZ`b Zk_ilbq_kdZy ih\yadZ

KhojZgyegZ_kvhlhjZy bgnbevljZpby kebabklhc h[hehqdb [
]ehldb k-egZZ kmldb ihke_ hi_jZpbb \uiheg_g jZaj_a kebabklhc
kl_gdb]ehldb \ f_kl_ gZb[hev-r[_jeh\uihemqZgby g_[hevrh_ dhebq
kmdjh\bqgh]h hl^_ey_fh]h

< ^Zevg_f ihke_hi_jZpbhdbc^c ijih_lj_dZe [_a hkh[_gghkl
ihemqZeZ fZkkb\gmx ijhlb\h\hkiZebl_evgmx b Zglb[Zdl_jbZev
aZ`beZ i_j\bqguf gZLyZ_oghkfhfbq_kdZy ljm[dZ m^Ze_gZ gZ k
=bklheh]bq_kdh_ aZdexq_gb_ ki_pabnybeqbkmZyodjb_kdjeh ma
< ijbe_`Zs_c `bjh\h-chqdZ]hbu_ djh\hbaebygby

Bgl_j_k ij_^klZ\e_ggh]h gZ[ex^_gby qkhkglhkflhly lhgZ
bkihevah\Zgb_ \k_o kh\j_f_gguo f_lh^h\ ^bZ]ghklbdb hdhgq
mklZgh\e_g ijZdlbq_kdbbhggZghfhi_kjZe_ Wlh _s_ jZa ih^l_
agZqbl_evgmx keh`ghklv _jbnbdZpbb oZjZdl_jZ h[t_fguo ijhp_

НАША ИСТОРИЯ

Профессор В.Ф.Ундриц
1891-1963

УНДРИЦ (Undritz <bev]_evf Nhfbeqkx_gly[1891]h^Z
[eba :j_gk[mj]Z Ehcmeyg^jkdkh\j_f_ggbZa\Zgb_
Dmj_kZj_ h KWZkZjh.gZy)
<u^ZxsbckhyheZjbg]heh] hkgh\Zl_ev rdheu ijbag
kljZg_ b aZ jm[_`hf >hdlhj f_^bpbgkdbo gZm-dhjj_kihgq^e_gd :FG KKKJ
ZAkem`_gguc ^_yl_ev gZmdb -]h jZg<hZ_g\jZq
DZ\Ze_j ^\jm_ogh\ E_gbgZ b hj^_gZ Hl_q-kl_gghc
kl_i_gb

Hl_-pmqbl_ev -@e_vgZZ <eZ^bfbjh\gZ ih h[jZah\Zgbx f_^
k_klj\Z_jguc kimlgbd `bagb ihklhyggZy b gdZ^hlbjZhyc ihufesgb
hq_gjvb\yaZg

Ihklmibe \ <hf_^bgphbgkdmx ZdZ^_fbx \ dhlhjmx hdhgqbe
1914] b [ue gZijZ\e_g gZ njhgl K] kh_jr_gkl\h\Zeky g
]hjeh\uo b ghkh\uo [he-fa_^bopb<ghk_dhgch ZdZ^_fbb ih^ jmdh\h^kl\
< B <hyq_ijhZc^y imlv hl hj^bgZlhjZ ^h aZf_klbl_ey gZqZev
>bkk_jlZpby gZ ^khdlhjZv f_^bpbgu ©:ebf_glZjguc ebfnZ^_gbl
Kl_i_gv ^hdlhjZ f_^bgZbmgkdibjbk\h_gZ [_a aZsblu ^bkk_jlZpbb
ijhr_e mkh_jr_gkl\h\Zbgbdbo =heeZg^bb b =_jfZgbb lj_^
hl_q_kl_ggmx hlhjbgheZjbg]hmehjZjx^ggZhc dhgn_j_gpbb \ Klhd
k ^hdeZ^hf ih ijh[e_fK Zee_j]bqbZ_^h\Ze kha^Zggu
wdki_jbf_gl-Zhevgh]bq_kdbf El^gbeghjZ^kdh]h GBB moZ]hjeZ
<]ba[jZg aZ\dZ^mx^sbc EHJ [Ihjeh_ag^bopbgkdh]h bgklblml
E_gbg]jZ^_ KlZgh\e_gb_ dZn_^ju [uehl_iq_kZ\Zgdhgk<c_ehbdgbc
1941-]] <bev]_evf Nhfbq [ue ijba\Zg \ Zj-he\gh]hdZq_kl
hlheZjbg]heh]Z]jZE^kdbgh njhglZ b dhgkmevlZglZ
w\Zdh]hkiblZe_c G_[hevrhc dhee_dlb\ dZn_^ju \ ly`_e_crb
E_gbg]jZ^Z ijh^he`Ze jZ[hlm b hdZau\Ze ki_pbZebabjh\Zgg
lhke_ \hcgu ih^ _]h jmdh\h^kl\hf \hah[gh\bekZk\rjZc[hhZgbZ dZn
ba_^msbo p_gljh\ \ kljZg_ ih hlheZjbg]heh]bb

GZmqgu_ bgl_j_ku < N Mg^jbpZ [ueb g_h[uqZcgh rbjh
dhgp_ipebb`Zeb nbabheh]bq_kdb_ nmgdpbhgZevgu_ \a]ey^u
ZgZebaZlhjh\\ebkb\gb_f mq_gby ZdZ^ ijBbfl_gZb\le\evZgh d mkeh\by
ghjfu b iZlhehBlkbihevah\Zgb_ wdki_jbf_glZevguo f_lh^h\ b
iha\hebeh h[t_dulb\\glhv jy^ dhebq_kl_gguo aZdhghf_jghkl_c
^_yl_evghkl-bhjEZHgJh\ i\he^bygb_f \g_rgbo \ha^_ckl\bc <i_j\u_
kbfilhf ©dlh\hc]emohl[u^keh\e_gguc ihjZ`_gb_f p_gl
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qlh khhl_lkl\h\Zeh hkgh\ghc_q\hkl\bgghc objmj]bb gZq
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:FG KKKJ aZ\ ZdZ^ < B Bbamg_gbhx kemoh\h]h ZgZebaZ
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;hevrh_ \gbfZgb_ m^_eye kh_jr_gkl\h\Zgbx f_lh^h\ bkke_
we_dljhZdmklbq_kdbc f_lh^ ^eyh[hkkeh\hZgbfuo jZajZ[hlZe
f_lh^ nmgdpbhgZevghc hp_gdb \gmlj_gg_]h moZ k ihfhsvx j