
HIGH FREQUENCY OSCILLATORY VENTILATION IN RESPIRATORY TREATMENT OF NEONATES WITH SEVERE RESPIRATORY DISTRESS-SYNDROME

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The respiratory distress syndrome most commonly defines the severity of condition in neonates, especially in prematures. In this situation the conventional ventilation may have low efficacy and can be followed by enough severe complications. As the alternative to conventional ventilation we used high-frequency oscillatory ventilation provided by Sensor-Medics 3100A ventilator.

Basic indications to HFOV were severe RDS, massive meconium aspiration syndrome (MAS), congenital malformations complicated by increased elevated pulmonary vascular pressure and pulmonary shunting (congenital diaphragmal hernia). We used HFOV in 50 neonates, 75% of them developed severe RDS and had the birth weight less than 2 kg.

We noticed definite rapid positive changes in 70% of patients receiving HFOV combined with surfactant replacement therapy (Exosurf). The criteria of efficacy were changes in arterial blood gases, x-ray pictures, improvement of hemodynamics.

We also noticed significantly less such severe complications as intestinal emphysema, pneumothorax and bronchopulmonary dysplasia. We also get the possibility to rapid decrease oxygen concentration down to 21%. The amount of severe neurological complications (such as intraventricular hemorrhages, periventricular leucomalacia, and brain edema) also decreased when the severe RDS resolved rapidly.

The obtained data give us the possibility to consider the HFOV as a prospective advanced therapy of neonatal RDS.

COLORED AND PULSED DOPPLER SCANNING IN DIAGNOSING OF BENIGN AND MALIGNANT OVARIAN TUMORS

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Objective: *We report our experience to determine value of colored and pulsed Doppler sonography in diagnosing between benign and malignant ovarian tumors.*

Methods: *64 patients with ovarian tumors were investigated by using of transabdominal and transvaginal sonography scanning with colored and impulse Doppler. Average age was years ranging from 35 to 65 years. The middle size of tumor was from 7 to 12 sm. During investigation intramural neovascularization zones were found out. Indices of blood supplying resistance (RI - resistance index, PI - pulsatility index in ovarian, external and internal iliac arteriae), presence or absence of protodiastolic excision, minimal and maximal systolic speed were analyzed. All patients were operated by laparoscopy or laparotomy with further morphological investigation.*

Results: *Neovascularization zones were detected in 98% of malignant tumors and in 1.5% of benign tumors. Protodiastolic excision was observed in 89% of benign tumors. There were no cases of ones among malignant tumors. The middle range of RI was 0.46 ± 0.2 in malignant and 0.69 ± 0.1 - in benign tumors. Sensitivity and specificity were 86.2% and 86.7%, respectively. Correspondingly the middle ranges of PI were 1.08 ± 0.06 and 0.5 ± 0.12 , with sensitivity 89.2% and specificity 90.4%. The summary of all blood supplying speeds has the best prognostic result with sensitivity 99% and specificity 85%.*

Conclusions: *The using of colored and impulse Doppler sonography provides to diagnosed of benign ovarian tumors during screening procedures.*