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Brief Introduction: Twin pregnancy with a healthy fetus and an hydatidiform mole is extremely rare, occurring in 1:20.000–100.000 twin pregnancies. In the majority of cases it is associated with poor maternal and fetal outcomes.
Materials & Methods: -
Clinical Cases or Summary Results: A 30-year-old, nulliparous woman underwent an intra-uterine insemination with donor sperm. At 13 weeks of gestation the ultrasound examination showed a dichorionic twin pregnancy; twin A had an omphalocele and the placenta was enlarged, with multiple cystic and hyperechogenic areas, suggesting a trophoblastic disease; twin B had no major abnormalities and the placenta looked normal. Detailed counseling concerning maternal and fetal risks was provided. An amniocenteses was performed at 15 weeks of gestation and the kariotype was normal for both fetuses. At 18 weeks of gestation death of the affected fetus occurred. At 35 weeks, twin B showed fetal growth restriction and two weeks later tlabour was induced because of severe pre-eclampsia. A 2280 g healthy newborn was delivered. Histology of the placenta of the death fetus confirmed a partial hydatidiform mole. Postpartum serial HCG follow-up showed a progressive decrease.
Conclusions: In the rare event of a twin pregnancy with a partial hydatidiform mole coexisting with a viable fetus, proceeding the pregnancy may be an option although several complications such as pre-eclampsia and fetal growth restriction. Thus close surveillance is mandatory in order to detect early signs of maternal or fetal complications.

Keywords: Twins; hydatidiform mole

Presenter: I. Rato

ID 66

INTRA GASTRIC PRESSURES IN NEONATES RECEIVING BUBBLE CPAP

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Brief Introduction: Although bubble CPAP is seen to be superior to continuous steady pressure CPAP, it is reported that its pressure delivery system can be highly variable and unpredictable. CPAP has been associated with gastrointestinal adverse effects – although rarely. The CPAP belly syndrome is one such adverse effect characterised by gaseous bowel-distension in infants treated with nasal CPAP.

The pressures transmitted from oropharynx to stomach during BCPAP are not known. Intra gastric pressures in babies receiving nasopharyngeal BCPAP have not been studied previously to the best of our knowledge.

This study was done to study intra-gastric pressures in neonates receiving bubble CPAP by nasopharyngeal prong.
Materials & Methods: 27 neonates were recruited for the study. Bubble CPAP pressure of 6 cm water was used in all the neonates. A pressure sensor (by sensoromedic ® was attached to a 5V regulated power supply and the voltage drop across appropriate leads of the sensor was proportional to the pressure difference,) was attached to orogastric tube to measured the intra gastric pressure prior to starting bubble CPAP and again after 30 to 90 minutes of CPAP. The software for the data logging was provided by MECO® 81 K -TRMS. We routinely checked the calibration at different depths of water and found it accurate with an error of less than 2%.

The clinical variables like Downe's score, oxygen saturation, venous blood gas pH, pCO2 and abdominal girth were recorded alongside with pressure readings.
Clinical Cases or Summary Results: In our study there was statistical improvement ($p < 0.05$) in parameters of respiratory distress like Downe's score (DS), oxygen saturation (SpO2), venous blood gas parameters (pH, pCO2).

The mean intragastric pressure before starting BCPAP was 12.422 cm H2O, (95% CI 8.65 to 16.18) and during BCPAP it was 12.88 cm H2O (95% CI 10.48 to 15.29). The intragastric pressure always remained positive and the overall change in intragastric pressure recordings (paired t test) was 0.464 cm H2O (95% CI -5.11 to + 4.18,) ($p = 0.838$).
Conclusions: We found that nasopharyngeal Bubble CPAP at pressure of 6 cm water, decreased work of breathing, improved gas exchange and improved Downe's score. We found no significant increase in intra gastric pressures and gastrointestinal complications such as abdominal distention, NEC, perforation during our study.

Further multi centric studies with larger number of cases, are required for predicting accurate changes in intragastric pressures.

Keywords:

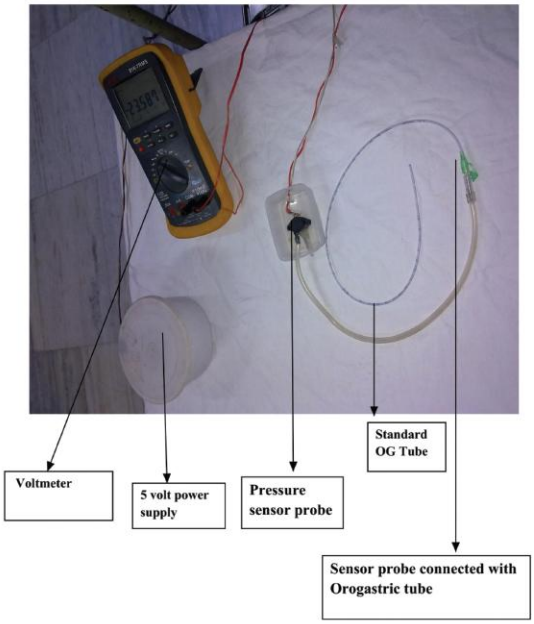
Presenter: Puliyel J.

Table 2. Pressure variance in recorded pressures before and after BCPAP

Variables	Pressure Values before CPAP Mean cmH_2O, 95% C.I	Pressure Values after CPAP at 6 cmH_2O Mean cmH_2O, 95% C.I	Difference in Mean, 95% C.I	*p* Value (Significant ≤ 0.05)
Intra Gastric Pressures	12.422 cmH_2O, (8.65 to 16.18)	12.88 cmH_2O, (10.48 to 15.29)	0.464 cmH_2O, (−5.11 to 4.18)	0.8384

Table 1. Clinical Variables Before and After BCPAP

Variables	Values before CPAP Mean , 95% C.I	Values after CPAP at 6 cmH_2O Mean , 95% C.I	Difference in Mean, 95% C.I	p value (Significant ≤ 0.05)
DOWNE'S Score for Respiratory Distress	4.37 /10, (3.60 to 5.13)	1.96 /10, (1.36 to 2.55)	2.40 /10, (1.92 to 2.88)	<0.0001
Oxygen saturation (SpO_2)	92.74%, (90.50to 94.97)	98.4 %, (97.41 to99.39)	5.66 %, (7.37 to 3.95)	<0.0001
Venous Blood Gas-pH	7.259, (7.225to 7.294)	7.327, (7.302 to 7.352)	0.067, (0.101 to 0 . 033)	<0.0004
Venous Blood Gas - pCO_2	44.72 mm Hg , (41.99 t o 47.44)	39.61 mmHg, (37.13 to 42.09)	5.10 mmHg, (2.95 to 7.26)	<0.0001



Pressure Transducer circuit

ID 399

LIMITING OXYGEN ADMINISTRATION IN THE DELIVERY ROOM THROUGH OXIMETRY MONITORING

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Brief Introduction: In spite of the overwhelming evidence of harmful effects of excessive administration in neonates, oxygen is still widely and liberally used in delivery rooms throughout Romania. The aim of this paper is to identify through oximetry newborns that require oxygen supplementation in the delivery room.
Materials & Methods: We conducted a prospective study on 5406 neonates, born in the Cuza-Voda Maternity Hospital in Iasi, Romania, from December 2012 to December 2013. We assessed the following parameters: gestational age, birth weight, Apgar scores at 1, 5, 10, 20 minutes and preductal oxygen saturation at 1, 5, 15, 30 and 60 minutes. We used Nellcor™ and Masimo™ pulse oximeters. Data were collected and analyzed in order to assess the usefulness of oximetry monitoring in the delivery room.
Clinical Cases or Summary Results: The mean gestational age in our lot was 38.18 weeks and the mean birth weight was 3175 grams. Apgar scores at 1, 5, 10, 20 minutes were between 1 and 10, with a median value of 9 at all moments. SpO2 values at 1 minute were between 40% and 90% in term newborns and between 50 and 82% in preterms. Mean SpO2 values throughout monitoring were: 65% at 1 minute, 80% at 5 minutes, 92% at 15 minutes, 97% and 98% at 30 and 60 minutes, respectively. Following oximetry readings, we ascertained that 87.72% of the infants required no resuscitation at birth, 10.73% needed basic resuscitation (tactile stimulation or free-flow oxygen) and only 1.55% required complex methods of resuscitation (positive-pressure ventilation, chest compressions, medication).
Conclusions: Routine use of pulse oximetry in the first hour after birth led to judicious use of oxygen in the delivery room. Pulse oximetry can be used as a standard method of monitoring infants in the delivery room, as it is simple, inexpensive and noninvasive.

Keywords: pulse oximetry, oxygen administration, delivery room

Presenter: Andreea Avasiloaiei

ID 88

REDUCTION IN THE INCIDENSES OF BACTERIAL COMPLICATIONS OF INCHALET NITRIC OXIDE IN NEWBORNS WITH RESPIRATORI PATHOLOGY ON A VENTILATOR

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Brief Introduction: It is known, that infants with respiratory diseases with Mechanical Ventilation (MV), the development of bacterial complications is due including the activation of apoptosis of T lymphocytes and low-activated macrophages (CD14) [1]. Some clinical studies confirm the influence of inhaled nitric oxide (iNO) on anti-infectious resistance [2]. With the purpose reduce the incidence of bacterial complications studied the effects of iNO on subpopulation structure and apoptosis of T- Lymphocytes.
Materials & Methods: In a controlled, randomized, blind clinical trial included 37 newborns on MV. Randomization was performed by the method of envelopes. Group I ($n = 20$) patients receiving inhalation of iNO in a concentration of 10 ppm for 24 hours («Pulmonox mini», «Messer II NO Therapeutics», Austria). In Group II ($n = 17$) did not receive iNO. At admission and at 3–5 day was studied subpopulations of lymphocytes in the venous blood: CD3, CD4, CD8, CD14, CD19, CD34, CD56, CD69, CD71, CD95 monoclonal antibody (Immunotech Beckman Coulter, USA); the relative content of Lymphocytes in apoptosis using AnneksinV + labeled FITK and propidium iodide (PL+), labeled with PE (Saltag, USA), with the results on the cytometer Beckman Coulter Epics XL (USA). The statistical power of the study was 80% ($\alpha \leq 0.05$).
Clinical Cases or Summary Results: In Group I relative to group II on 3–5 day was registered an increase mature monocytes (CD14) - $23.1 \pm 0.8\%$ ($p < 0.05$); reduction in the relative content of CD69 - $3.8 \pm 0.21\%$, lymphocyte of apoptosis: Annexin V-FITC + PI- $7.12 \pm 0.46\%$ and Annexin V-FITC + PI + $0.79 \pm 0.07\%$ ($p < 0.001$). Duration of MV was 4.1 ± 1.4 days (18 ± 3.4 in Group II). All newborns survived and were not septic complications. None of the patients showed clinical or laboratory evidence of adverse effects of iNO. In Group II: fatai outcome - 7 newborns, the Incidence of Sepsis – 5.
Conclusions: Inhaled Nitric Oxide in Newborns on M.V. increase in the relative content mature macrophages and decreased the lymphocytes in apoptosis; decreased the Incidence of Sepsis and Fatal Outcome, as well as the Duration of MV.

Keywords: Inhaled Nitric Oxide, Newborn, Apoptosis

Presenter: M. Puhtinskaya