Conclusions

It is difficult to state, based on our material, that room air ventilation during resuscitation is beneficial for preterm neonates.

Based on our results we can assume that the use of room air during resuscitation of term neonates is just as efficient as ventilation with 100% oxygen.

Based on these conclusions we plan a randomized allocation concealed study.

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Abstract UENPS.46
A newborn with generalized crusted papulonodular rash at birth A Hashimoto–Prietzke case

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Background and aim

Pathological skin lesions are rare disorders in the newborn period and red–brown papules specifically may present a diagnostic dilemma. Apart from primary skin disorders, the differential diagnosis includes infectious diseases, benign or malignant tumors and storage diseases.

Materials and methods

Report on one case.

Results

A full-term newborn, male, with widespread eruption since birth, consisting of multiple reddish-brown nodules, papulonodules, sometimes with ulcerations and scabs, concerning all the body, except for the mucous membranes, with a predilection for the face and thorax, without general abnormalities. Blood tests revealed no abnormalities and antibody titers of TORCH, varicella and syphilis were inconspicuous. Bacterial and viral cultures were also negative. X-rays of the chest and ultrasonography of the abdomen and brain were also normal. A biopsy and haematoxylin–eosin stain revealed dermal infiltration of pleomorphic histiocytes with eosinophilic ground-glass cytoplasm and round to bean-shaped nuclei. The histiocytic cells were positive for antibodies against S-100 protein and CD1a, but negative for anti-CD68. The clinical examination, histopathological data, immunohistochemistry, and the benign evolution during the following months with no particular treatment define the diagnosis of congenital self-healing Langerhans' cell histiocytosis of Hashimoto–Pritzker (CSHLCH).

Conclusions

Generalized crusted papulonodular rash at birth may present a real challenge to the pediatrician and an important stress to their parents. Despite its impressive clinical presentation, CSHLCH is a benign condition. Careful evaluation for systemic disease such as the Letterer–Siwe disease must be performed at the time of diagnosis. As long as many questions remain unanswered and because of the apparent close relationship to malignant Langerhans cell histiocytosis, caution is indicated and long term follow-up of these patients is recommended.

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Abstract UENPS.47
Evaluation of a new transcutaneous measurement of PCO_2

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Background and aim

The intrapartum acid-base status of the fetus is an important parameter to establish the relation between intrapartum events and neonatal condition. Umbilical cord blood gas analysis is a reliable way to determine the acid-base status of the fetus. Noninvasive monitoring of pCO_2 and oxygen saturation (SpO_2) can give idea about intrapartum status of the newborn.

Aim: To evaluate the relation between SpO_2, pulse rate (PR) and transcutaneous measurement of pCO_2 ($TcPCO_2$) in healthy term infants immediately after birth in delivery room.

Materials and methods

In a prospective, nonrandomized study of 20 healthy term infants of uneventful pregnancies the new sensor for combined $TcPCO_2$, pulse rate (PR) and SpO_2 was tested. The V-Sign(tm) Sensor is a digital sensor for noninvasive and continuous monitoring of transcutaneous carbon dioxide partial pressure ($PcCO_2$), oxygen saturation (SpO_2), and pulse rate (PR). The SenTec Digital Monitor (SDM) is a lightweight (2.5 kg) stand alone monitor (SenTec AG, Therwil, Switzerland).

For each baby one seperate sensor was applied by a resident after drying the baby and the values of SpO_2, PR and $TcPCO_2$ were recorded by a neonatologist at 5th, 10th and 15th minutes of birth in the delivery room.

Results

Fourteen infants were male, 6 were females. Mean birth weight of infants was 3351gr (2580–4220). All infants were born vaginally. Mean SpO_2 value at 5th minute was 88.78% (73–100%), at 10th minute was 91% (75–100%), at 15th minute was 92.78% (77–100). Mean PR value at 5th minute was 155/min (132–180), at 10th minute was 149.8/min (130–166), at 15th minute was 146.3/min (126–161). Mean $TcPCO_2$ value at 5th minute was 41 mm Hg (23–66.8), at 10th minute was 40.69 mm Hg (17–75.3), at 15th minute was 41.58 mm Hg (13.8–72). 5th min. $TcPCO_2$ value was highly correlated with PR at 5th and 10th min($p=0.004$). $TcPCO_2$ at 5th min. was not correlated with SpO_2 at 5th min ($p=0.2$). However 5th min. SpO_2 value has no correlation with 5th min. PR ($p=0.6$) which shows that $TcPCO_2$ mesurement was more sensitive than SpO_2 mesurement.

Conclusions

Early measurement of $TcPCO_2$ value is more sensitive than SpO_2 value to determine the neonatal condition. $TcPCO_2$ can be used to measure intrapartum status of the newborn and comparing $TcPCO_2$ with that of umbilical cord may be subject of another study.

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Abstract UENPS.48
Impact of diaphragmatic paralysis following surgical ligation of patent ductus arteriosus in very low birthweight infants

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Background and aim

Patent ductus arteriosus (PDA) is frequently seen in VLBW infants. Both hemodynamic aberrations caused by a PDA and treatment modalities for this condition may result in mortality and morbidity. Phrenic nerve injury is one of the complications of PDA ligation and will lead to diaphragmatic paralysis. Management of diaphragmatic paralysis in neonates is controversial. Besides, in the literature, little is focused on VLBW infants. The aim of this study is to justify different treatment modalities and to analyze clinical outcome among VLBW infants with diaphragmatic paralysis following surgical ligation of PDA.

Materials and methods

Medical records were retrospectively reviewed during the period from January 2003 to December 2007. The diagnosis was made either from the