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Abstracts

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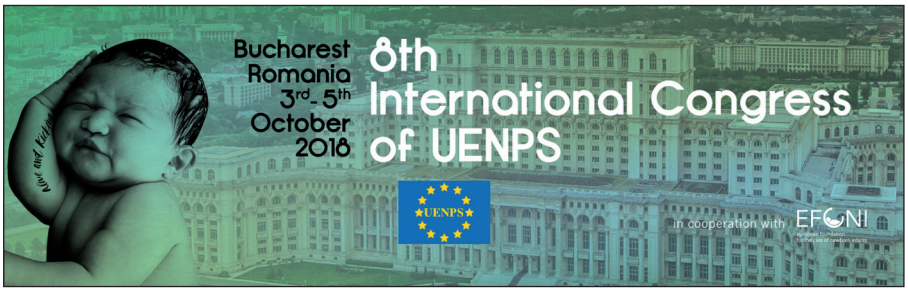

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ABS 1

BLOOD GAS DIFFERENCES BETWEEN THE UMBILICAL ARTERY AND VEIN IN TERM AND PRETERM NEWBORNS

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INTRODUCTION

Cord blood gas analysis reflects placental respiratory and metabolic function and is commonly used to assess fetal status at birth. The aim of the study was to identify the differences in blood gas parameters between the umbilical artery (UA) and vein (UV) at birth in term and preterm infants.

METHODS

Umbilical cord artery and UV samples were collected from 225 term and 57 preterm infants. Term infants were classified in two groups – AGA and SGA – according to birth weight percentile.

RESULTS

pH and pO_2 were lower and pCO_2, HCO_3 – and base excess (BE) were higher in the UA compared with the UV, in both AGA and SGA term infants. In preterm infants, there were no differences in pH between the UA and UV, while pO_2 was lower and pCO_2 was higher in the UA than UV. In the UA, pO_2 BE and potassium (K+) were lower while sodium (Na+) and calcium (Ca++) were higher in preterm than term newborns. Glycaemia was lower in the UA than in the UV in all newborns and was related to venous glycaemia measured in the first hour of life (**Fig. 1**).

CONCLUSIONS

Significant differences in blood gas parameters between the UA and UV in both term and preterm newborns suggest the importance of the placental barrier and the need for accurate cord blood gas analysis interpretation at birth. Cord glycemic values appear to be a noninvasive tool for the prediction of glycaemia during the first hour of life.

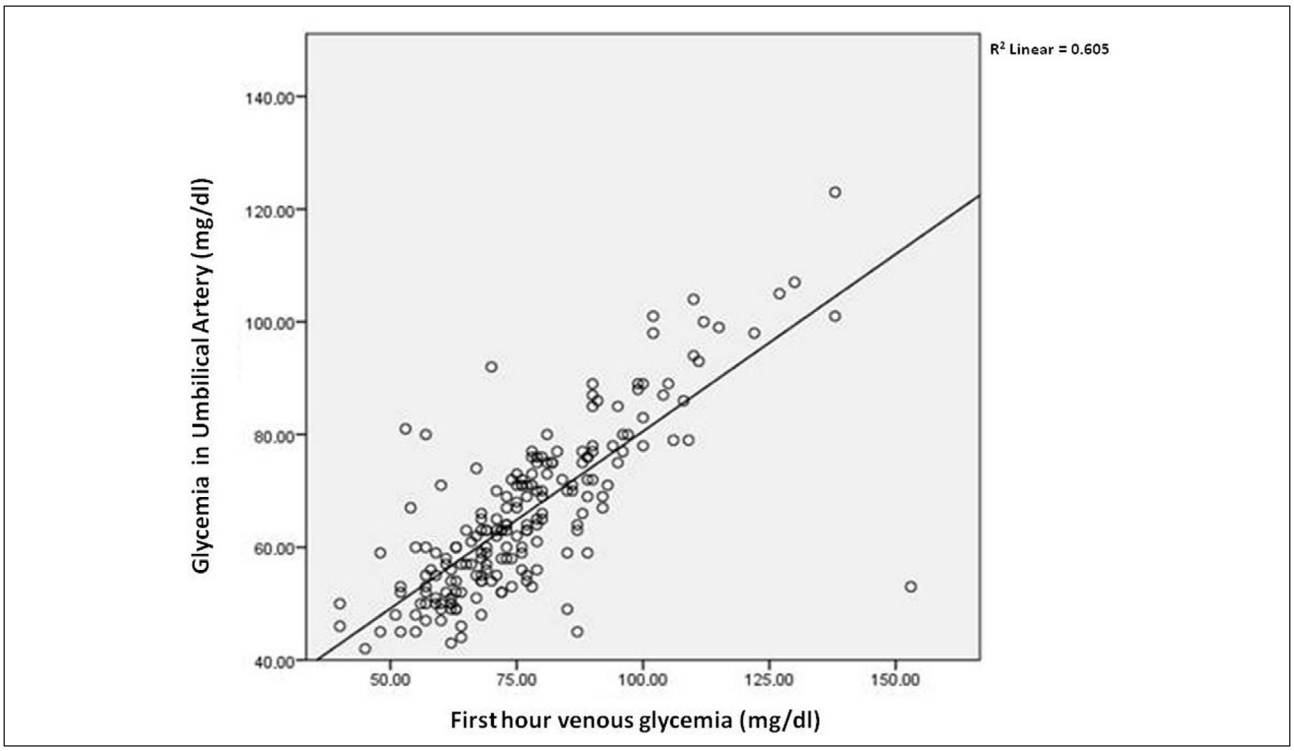

Figure 1 (ABS 1). Glycaemia was lower in the umbilical artery (UA) than in the umbilical vein (UV) in all newborns and was related to venous glycaemia measured in the first hour of life.

ABS 2

IS UMBILICAL CORD BLOOD LACTATE MEASUREMENT A RELIABLE PROGNOSTIC TOOL FOR POSTNATAL OUTCOME?

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INTRODUCTION

During the history of neonatology, many parameters have been proposed to describe postnatal adaptation and to predict later outcome, among which Apgar scores and umbilical blood gases are the most frequently used ones. Lactic acid as a terminal product of anaerobic metabolism is usually elevated in situations of decreased oxygen delivery to tissues. Several studies have found direct correlations between elevated lactate levels and poor outcome in infants admitted to the intensive care units. The aim of our study was to determine whether there is a direct correlation between lactate levels or other blood gas parameters and postnatal adaptation.

METHODS

232 term or near-term infants with good postnatal outcome were included in a prospective study, regardless of way of birth. All neonates were assisted at birth by a medical team and underwent clinical assessment; umbilical cord blood gas was measured in the first 5 minutes of life. Postnatal adaptation and short-term outcomes was monitored. Inclusion criteria: all term and near-term infants who were vigorous at birth and went to rooming in. Exclusion criteria: need for any resuscitation manoeuvres at birth, or postnatal pathology of any kind.

RESULTS

151 (65.08%) out of 232 infants were vaginally delivered, 24 (5.89%) of whom had meconium-stained amniotic fluid but were vigorous at birth. Among 81 c-sections, 28 were elective, 53 had various indications due to the fetus. Medium gestational age was 38.89 ± 1.4, with average birth weight of 3,312.98 ± 528.87 with no significant differences between the groups. Apgar scores at 1 and 5 minutes were 9.13 ± 1.09/9.64 ± 0.68, slightly lower in infants born by emergency c-section: 8.62/9.2. Umbilical cord blood pH had an average value of 7.25 ± 0.17 in vaginally delivered infants and 7.2 ± 0.2 in emergency c-sections. pCO_2 and pO_2 were in normal ranges for postnatal age, without significant differences between groups. Lactate of the whole cohort had an average value of 4.53 ± 3., higher in vaginal deliveries: 5.25 ± 5.1, with lower variability in the meconium-stained amniotic fluid group: 5.23 ± 2.24, lower values were observed in elective c-section: 2.32 ± 0.87. Greater variability of lactate and pH values were found in meconium-stained amniotic fluid births, vaginally or by c-section, where blood gas did not correlate well with the clinical findings.

CONCLUSIONS

During physiological labor and birth, lactate may be elevated immediately after birth due to higher oxygen demand and relative hypoxia. Moderate fetal distress indicated by meconium in the amniotic fluid may modify blood gas values which will not correlate with a good clinical presentation. Transient elevated lactate or low pH levels need further monitoring, but cannot be used as isolated prognostic tools in the absence of clinical signs.

ABS 3

SHOULD WE TAKE GESTATIONAL AGE INTO CONSIDERATION WHEN ASSESSING AN ECG?

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INTRODUCTION

The electrocardiogram (ECG) is a simple and low-cost test widely used in neonatal intensive care units (NICUs). However, its interpretation in the neonatal period is not yet fully understood and there is no imaging correlation to demonstrate malformation of any anatomical structure of the heart. There are no studies defining normal values for the preterm population of infants. We compared ECG findings of term with those of late preterm (LPT) babies without congenital heart diseases.

METHODS

We studied 32 babies in the first seven days of life, all born at the Hospital das Clínicas FMUSP, a tertiary neonatal unit in São Paulo, Brazil. All babies had anatomically normal hearts on echocardiogram and normal in-hospital evolution. They were divided by

Table 1 (ABS 3). Electrocardiogram (ECG) results in term versus preterm newborns.

		Late preterm (n = 16)	Full-term (n = 16)	p			Late preterm (n = 16)	Full-term (n = 16)	p
Heart rate (bpm)		131 ± 13.8	122 ± 18.4	0.1134	**R amplitude V1 (mm)**		9.4 ± 3.8	12.8 ± 5.6	0.0594
P amplitude DII (mm)		1.4 ± 0.4	1.2 ± 1.4	0.1206	**S amplitude V1 (mm)**		7.8 ± 5.0	9.0 ± 5.6	0.5315
QRS Axis (°)		155.9 ± 60.9	134.0 ± 45.2	0.2588	**R/S V1**		2.14 ± 0.6	2.27 ± 0.73	0.8914
Amplitude QRS (mm)	**DI**	-3.13 ± 2.9	-3.87 ± 2.3	0.5499	**T-wave duration (ms)**	**DI**	174.67 ± 43.0	172.50 ± 39.9	0.8854
	DII	1.90 ± 4.7	3.15 ± 5.8	0.508		**DII**	189.23 ± 49.4	198.67 ± 37.4	0.5706
	DIII	5.28 ± 4.1	7.21 ± 4.5	0.2124		**DIII**	169.23 ± 29.0	180.00 ± 52.7	0.4919
	aVR	0.50 ± 3.3	0.37 ± 3.6	0.9188		**aVR**	172.00 ± 42.0	172.00 ± 39.1	0.9999
	aVL	-4.12 ± 2.8	-5.81 ± 2.4	0.0807		**aVL**	168.33 ± 41.3	158.46 ± 42.8	0.5636
	aVF	3.5 ± 4.7	5.7 ± 5.0	0.2088		**aVF**	185.71 ± 42.6	200.00 ± 65.3	0.4909
	V1	1.62 ± 5.0	3.71 ± 6.2	0.3028		**V1**	186.25 ± 50.0	181.25 ± 45.9	0.77
	V2	0.44 ± 4.7	1.90 ± 5.7	0.4335		**V2**	181.25 ± 33.8	195.00 ± 48.2	0.3576
	V3	2.12 ± 5.8	6.65 ± 7.5	0.0647		**V3**	185.00 ± 34.6	188.75 ± 58.0	0.8261
	V4	4.06 ± 4.4	6.62 ± 6.3	0.1892		**V4**	166.25 ± 45.4	192.00 ± 48.9	0.1393
	V5	3.84 ± 4.6	6.46 ± 5.5	0.1523		**V5**	168.75 ± 46.2	188.75 ± 47.3	0.2357
	V6	3.37 ± 6.0	5.93 ± 5.3	0.2111		**V6**	185.33 ± 51.5	196.25 ± 33.6	0.4877

gestational age (GA) into two groups: between 37 and $41^{6/7}$ weeks (n = 16) and between 35 and $36^{6/7}$ weeks (n = 16) of GA. Twelve-lead ECGs were performed and analysed in all babies by a single investigator, who assessed the following parameters: heart rate (automatically measured by the device), frontal plane QRS axis, P wave amplitude and P-R interval in DII, Q wave amplitude (DIII), Q, R and S wave amplitudes (V1), R and S waves (V6), R/S (V1 and V6), QRS amplitude and duration, and T wave duration in all 12 leads. The data obtained was analysed using unpaired T test, and chi square test. $P \leq 0.05$ was considered significant.

RESULTS

When compared to the European normal neonatal ECG guidelines, our term population was not statistically different. Mean heart rate (122 x 123 bpm), QRS axis (134° x 134°), PR interval (103 x 110 ms), QRS duration (49 x 50 ms), SV1 + RV6 (21 x 29 mm). In the LPT group we found significantly lower values of PR interval (92.5 ± 14.4 x 103.8 ± 15.0 s; p = 0.0384), QRS duration in V2 (41.3 ± 5.0 x 51.3 ± 10.2 s; p = 0.015) and Q wave amplitude (1.8 ± 1.5 x 3.40 ± 2.2; p = 0.0247). Although not statistically significant, we found higher heart rate (131 ± 13.8 x 122 ± 18.4 bpm; p = 0.1134), and QRS axis more deviated to the right (155.87° ± 60.9 x 134.04° ± 45.2; p = 0.2588) in LPT compared to term babies. Similarly, QRS amplitude (V1-V3) mean values were up to 4 times higher in term versus LPT newborns. The main results are set out in **Tab. 1**.

CONCLUSIONS

In our study, the gestational age should be considered in terms of ECG analysis, since the LPT showed a shorter PR interval, narrower QRS (V2) and a smaller Q wave (DIII). This suggests that a significant difference might be found with a larger sample. Our term group was similar to the normal neonatal ECG standards by the European Guidelines.

ABS 4

THE ROLE OF SERUM NTpBNP LEVELS IN DETECTING HEMODYNAMICALLY SIGNIFICANT PDA IN PRETERM NEONATES

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INTRODUCTION

The ductus arteriosus is a vital structure that enables communication between the pulmonary artery and descending aorta during fetal life. However, delay in its postnatal closure, named as patent ductus arteriosus (PDA), may lead to serious problems. The

Table 1 (ABS 4). Serum N-Terminal pro-BNP (NTpBNP) levels of the groups.

	Closed ductus arteriosus (n = 27)	Patent ductus arteriosus, no treatment (n = 14)	Patent ductus arteriosus, treatment (+)		p
			Oral Ibuprofen (n = 15)	Intravenous Ibuprofen (n = 10)	
NTpBNP	720.94 ± 1.04	799.47 ± 1.4	786.32 ± 1.39	783.97 ± 1.26	0.535

Values are expressed as mean ± SD.
Significance: $p < 0.05$.

aim of our study was to evaluate if serum N-Terminal pro-BNP (NTpBNP) levels may be used for early detection of hemodynamically significant PDA (hsPDA). Among the patients with hsPDA who were treated with oral or IV ibuprofen medically, the change and relation of serum NTpBNP levels before and after treatment was also determined.

METHODS

Sixty-six VLBW preterm infants with patent ductus arteriosus were enrolled in this prospective, double blind randomized study. The study protocol was approved by the local committee. Informed parental consent was obtained for all infants. After performing echocardiography and clinical examination, patients with hsPDA received either intravenous or oral ibuprofen at an initial dose of 10 mg/kg, followed by 5 mg/kg at 24 and 48 h. NTpBNP levels were evaluated before and after treatment. The ductus was found to be closed in 27 babies comprising Group 0. In 14 babies who were grouped as Group 1, the ductus was found to be open but was not hemodynamically significant based on echocardiographic and clinical evaluation. These 14 babies did not receive any treatment. Group 2 was composed of 25 babies with hemodynamically significant PDA. With double blind randomization, 15 received oral ibuprofen and 10 received IV ibuprofen. In the 24 hours after treatment, control echocardiography was performed with clinical examination and serum NTpBNP levels were re-evaluated.

RESULTS

The mean gestational age was 29.09 ± 1.80 gestational weeks, the mean birth weight was 1,160 ± 230 g. Among the babies who were examined by echocardiography in the first 24-72 hours of life, the ductus was found to be closed in 40.9% (n = 27). Fourteen (21.2%) neonates were found to have hemodynamically insignificant PDA and were followed without treatment. Twenty-five (37.9%) neonates had hemodynamically significant PDA. In the group of babies with hsPDA, although serum NTpBNP levels were found to be higher than in the other two groups, this difference was not statistically significant ($p = 0.535$) (**Tab. 1**). Among babies with PDA and closed ductus arteriosus, serum NTpBNP levels were not found to be statistically different ($p = 0.082$). Serum NTpBNP levels were found to be decreased after medical treatment, but this was not statistically significant ($p = 0.244$). Regarding oral and IV ibuprofen treatment, both were found to be effective (> 90%) in closing the ductus.

CONCLUSION

We showed that serum NTpBNP levels were not found to be a useful marker in detecting hsPDA. The role of serum NTpBNP levels in detecting and monitoring treatment in neonates with hsPDA is low.

ABS 5

THERAPEUTIC HYPOTHERMIA IN NEONATAL HYPOXIC ISCHEMIC ENCEPHALOPATHY IN A PORTUGUESE TERTIARY LEVEL CARE NEONATAL UNIT: 6 YEARS EXPERIENCE

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INTRODUCTION

Neonatal hypoxic ischemic encephalopathy (HIE) occurs in 1.5 per 1,000 live births in developed countries. About 15% to 20% of affected newborns (NB) die, and an additional 25% will sustain childhood disabilities. Induced therapeutic hypothermia (TH) is currently the standard of care for term neonates with HIE and has demonstrated neuroprotection and a decrease in mortality. The aim of this study was to evaluate the outcome of patients treated since the introduction of TH in June 2010 until October 2016.

METHODS

Retrospective study. Descriptive and bi-variate analysis with SPSS® 23. Analysis of demographic, clinical, neuro-imaging and enzymatic markers, comparing two groups of surviving neonates: NB with favorable outcome (normal brain magnetic resonance imaging) (group I) and NB with unfavorable outcome (group II).

RESULTS

One hundred and thirteen NB with HIE were treated with TH. The mortality rate before discharge was 23.9%. Of the surviving NB, 49 (56%) belonged to group I and 38 (44%) to group II. The two groups were similar regarding demographic variables, birth weight, gestational age and prenatal variables (obstetric events, meconial amniotic fluid, prolonged membrane rupture, mode of delivery). The first hour base deficit was higher in group II (-20.8 mEq/L) vs group I (-16), p = 0.014. The median value of lactic dehydrogenase was higher in group II as to initial value (p = 0.027), at 24 h (p = 0.006) and at 72 h of TH (p = 0.008). Other biomarkers (lactates and troponin) and glycemia showed no significant difference between the two groups. The median value of minimum partial pressure of carbon dioxide during TH was higher in group I, p = 0.032.

Clinical seizures were similar, but there were more electric seizures in group II, p = 0.025. There was no difference in the initial aEEG pattern and transfontanellar ultrasound. Enteral feeding was initiated earlier in group I (4.8 days) vs group II (8.4 days), p = 0.025. Neurodevelopment evaluation (Bayley II, Denver, neurosensorial evaluation) was performed according to the follow-up protocol. Only 56% had follow-up at the tertiary center.

CONCLUSIONS

We found the following clinical or biochemical predictors of poor neurological outcome: higher base deficit at first hour and lactic dehydrogenase, electric seizures and later enteral feeding. The mortality was similar to published data. A uniform long-term follow-up protocol is needed in order to evaluate their neurological outcome.

ABS 6

USE OF A CLINICAL SCORE TO PREDICT OUTCOME IMMEDIATELY AFTER NEONATAL TRANSPORTATION

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INTRODUCTION

Even with rigid application of regionalization criteria as regards delivery in at-risk pregnancies, birth may occur in inferior level hospitals and newborns have to be transferred to hospitals with appropriate facilities and level of care. The aim of the study was to evaluate the application of the clinical score proposed by Rathod et al. [1] to our population of newborns in order to predict outcome immediately after neonatal transportation.

MATERIAL AND METHODS

All newborns transferred to our level III regional unit between 01.01.2015 and 31.12.2017 were included in the study. Data were extracted for analysis from neonatal and NICU charts. The clinical score was calculated for every newborn using the criteria suggested by Rathod et al. [1]: respiratory effort, heart rate, mean blood pressure, axillary temperature, capillary filling time, random blood sugar and oxygen saturation in room air at admission. Unfavorable outcome was considered as a composite of severe intraventricular hemorrhage (grade 3 and 4) and/or periventricular leukomalacia and/or severe retinopathy of prematurity and/or death. Statistical analysis was performed using SPSS® 10.0 for Windows®; p was considered statistically significant at values < 0.05 (95% confidence interval) and, where appropriate OR was also calculated.

RESULTS

259 infants were transferred to our unit from lower level hospitals during the study period. 23 of them (8.8%) had an unfavorable outcome as described above. A clinical score of ≤ 8 was associated with a bad prognosis in 12 infants, a score ≤ 11 was observed in 15 of the infants with bad outcome while all infants with bad outcome had a score ≤ 14. The highest sensitivity the clinical score was calculated for a score ≤ 13 (91.30%), the highest specificity and negative predictive value was associated with scores ≤ 11 (53.58%, 95.45%, respectively), while the best positive predictive value was offered by scores ≤ 8. Compared to the other infants, those with unfavorable outcome were more often boys (p = 0.018), they were born more often in level 2 hospitals (p = 0.029), they were admitted significantly later after birth (p = 0.001) and they had higher clinical score (p = 0.001), lower hemoglobin levels (p = 0.019) and an increased incidence of late sepsis (p < 0.001, OR 7.94 [2.58-24.48]). No significant differences were found as regards gestational age and birth weight (even though lower) or birth asphyxia.

CONCLUSION

In our population, unfavorable outcome was associated with very good sensitivity by values ≤ 13 of the clinical score suggested by Rathod et al.

[1] while a score of ≤ 8 had the highest specificity and positive predictive value and scores ≤ 11 had an excellent negative predictive value. Male gender, delayed admission, lower levels of hemoglobin and late sepsis were also found to be risk factors for unfavorable outcome.

REFERENCE

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ABS 7

KEEPING READY FOR RESUS: IMPROVING NEONATAL RESUSCITATION EQUIPMENT AVAILABILITY IN THE DELIVERY ROOM

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INTRODUCTION

The 7th edition of the Neonatal Resuscitation Programme (NRP) from the American Academy of Pediatrics (AAP) is used as the standard of neonatal resuscitation in National Maternity Hospitals. The NRP details minimum resuscitation equipment requirements. An audit demonstrated poor compliance with these standards, with no delivery room fully equipped. The aim of this quality improvement project was to improve the number of resuscitaires in the Delivery Wards that are stocked with all the equipment required for neonatal resuscitation as per the NRP.

METHODS

This quality improvement study commenced with prospective audit of resuscitaire presence and contents in delivery rooms. Audit results were analysed to identify areas for improvement. Change initiatives were implemented, primarily a laminated checklist permanently attached to the wall beside the resuscitaire, and staff were re-educated on the importance of properly stocked resuscitaires. Weekly re-audits were used to keep run charts in order to monitor the change in the proportion of delivery rooms that were fully stocked, and provide feedback to further improvement efforts.

RESULTS

Baseline compliance with NRP minimum equipment list was 66.5%. It was decided that 100% compliance was necessary as the equipment list was a basic requirement. Weekly run charts demonstrated that compliance increased from a baseline of 98.4% the first week post-intervention to 100% in subsequent weeks.

CONCLUSIONS

A laminated checklist significantly improves the proportion of delivery rooms that are appropriately equipped with neonatal resuscitation equipment. This has reduced delays – for example – in acquisition of oxygen saturations as now all rooms have pulse oximeters and improved readiness for resuscitation.

ABS 8

USE OF INOTROPES AND OUTCOMES IN PRETERM INFANTS

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INTRODUCTION

Inotropes are used frequently in the management of extremely preterm infants. They are used for treating perceived haemodynamic instability. Very often blood pressure on its own is used as a marker of haemodynamic instability leading to overuse of inotropes on NICUs. Indiscriminate use of inotropes has been linked to adverse outcomes in preterm infants. A study was conducted to explore the association between inotrope use and short-term outcomes in all infants born below 29 weeks of gestation and admitted to our 64-bed tertiary neonatal center over a 2-year period.

METHODS

A retrospective study was conducted over a 2-year period from 1st June 2015 to 31st May 2017. Eligible infants (< 29 weeks) were identified from the electronic patient record database. Demographic, inotrope use and outcome data were collected using an access database from individual patient records. Data was analysed using IBM® SPSS® version 23 utilizing appropriate univariate and multivariate analysis.

RESULTS

Out of 223 babies < 29 weeks born during the study period, 99 (44.4%) received inotropes. Significantly more infants born at or below 25 weeks received inotropes compared to older gestations (74% v/s 33%, $p < 0.001$). Hypotension was the most commonly used marker for starting inotropes. Only 50% of infants who received inotropes had other

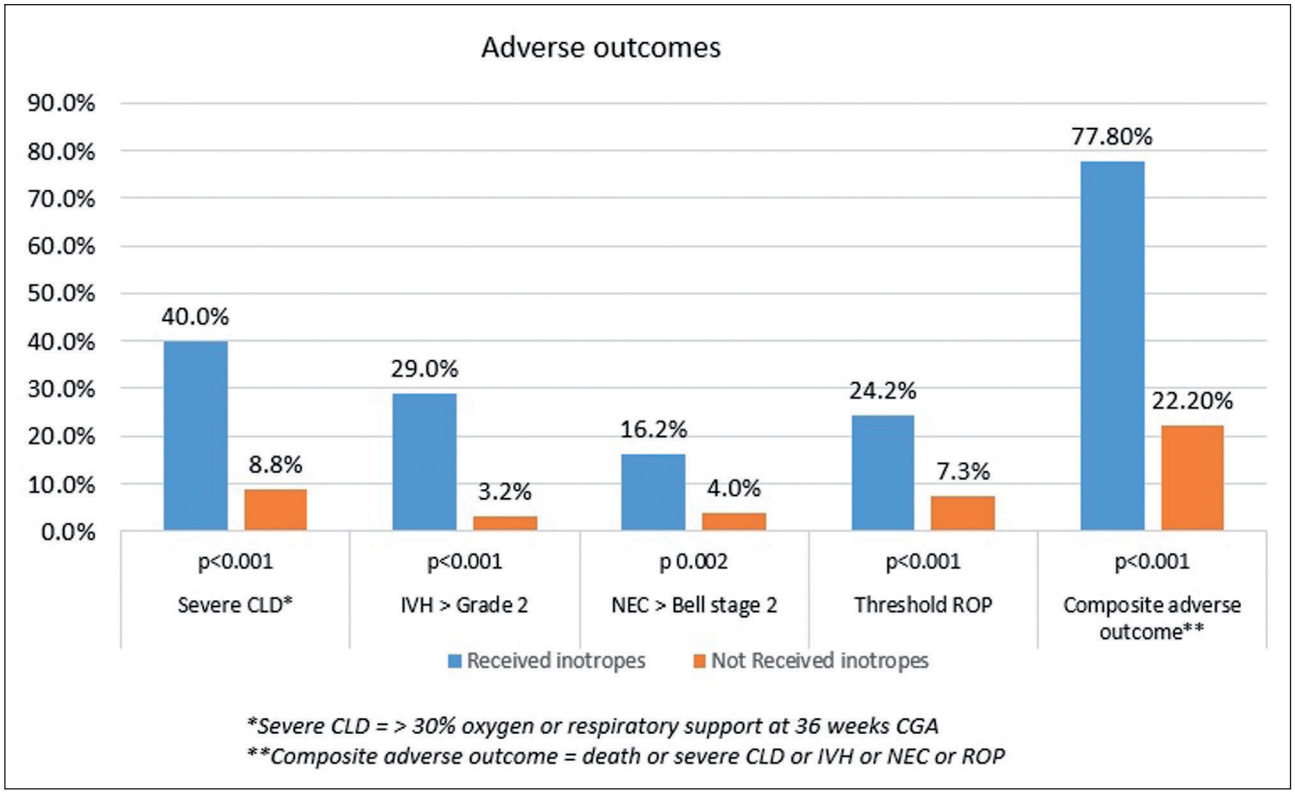

Figure 1 (ABS 8). Association between short-term adverse outcomes and inotrope use.

markers of hypoperfusion, including high lactate or oliguria. Dopamine was the most commonly used inotrope (98%) amongst the 99 infants, followed by dobutamine (56.6%), hydrocortisone (36.4%), and adrenaline (25.3%). Out of the 99 infants, 56.6% received multiple inotropes, ranging from 2 to 4 inotropes. All the adverse outcomes were significantly higher in infants who received inotropes (**Fig. 1**). The odds of mortality increased by 3.5 in infants receiving just one inotrope to 60 in infants receiving four inotropes. On multivariate analysis controlling for gestation, birth weight, use of antenatal steroids and sepsis during hospital stay, inotrope use remained a significant predictor of mortality with an odds ratio of 8 (95% CI 3.5-18.5).

CONCLUSIONS

Extreme preterm infants have a significant increase in adverse outcomes associated with inotrope use. This does not necessarily mean a causal association, though it cannot be ruled out by this study. Use of inotropes may be a marker of disease severity. The association between inotrope use and mortality could be used as a prognostic marker while counselling parents of these vulnerable infants. Further research is needed to ascertain whether there is a causal association between inotrope use and adverse outcome in extreme preterm infants.

ABS 9

WHERE ARE WE NOW WITH NEONATAL RESUSCITATION

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BACKGROUND

The Neonatal Resuscitation Program (NRP) is a practical tool to improve newborn survival and reduce death from perinatal asphyxia. In 2010, NR training was introduced in Rwanda. However, it is not known how NR training is integrated into clinical practice.

OBJECTIVES

As a Quality Improvement project, knowledge and application of the Rwanda Neonatal Treatment and NRP guidelines were assessed among Health Care Providers (HCP): Post-graduates (PG), Neonatal nurses (NN) and Midwives.

METHODOLOGY

Surveys were distributed to HCPs in July 2017 at the Centre Hospitalier Universitaire de Kigali (CHUK).

RESULTS
Eighty-seven HCPs answered: 32/46 PGs, 11/14 NNs and 44/65 Midwives. The main reason to attend birth is fetal distress (83%). Pediatrician or PGs are called the most (50%) to attend birth. Umbilical pulse (60%) is used more than the stethoscope (46%) to assess heart rate (HR) and if HR < 60 bpm, chest compression is done first (57%). Resuscitation is initiated with $FiO_2 \geq 0.5$ for terms (68%) and preterms (62%). Ventilation effectiveness is thought to be seen by chest rise 84%. Ambubag (75%) is reported as the tool to deliver Continuous Positive Airway Pressure (CPAP). More than 50% of respondents received NR training in the past year.
DISCUSSION
Birth attendance is called for high risk situations, but only physicians are regularly involved in delivery room resuscitation. NRP recommends the use of the stethoscope for HR assessment and this is not yet fully implemented at CHUK. When HR< 60 bpm, NRP recommends that ventilation and not chest compression be done first, as effective ventilation increases HR. Resuscitation is still started with high FiO_2 in spite of current recommendations. Despite the fact that ambubag cannot deliver CPAP, it continues to be used as such.
CONCLUSION
Bridging the know-do gap is a worldwide challenge and only good understanding of NRP principles and regular simulated practices can ensure skill acquisition and maintenance.

ABS 10

ASSESSMENT OF TRANSFUSION PRACTICES IN A NORTHERN AFRICA COUNTRY: A STUDY OF 111 CASES

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BACKGROUND
The evaluation of transfusion practices is one of the cornerstones of the process of improving the quality and safety of transfusion. Our goal was to assess the compliance of neonatal transfusions with good practice recommendations.
METHODS
We conducted a cross-sectional study (1 year) on 111 neonates hospitalized and transfused in the Neonatal Department (CHU Hedi Chaker, Sfax). All blood products were prepared and distributed by the Regional Blood Transfusion Center of Sfax. Clinical information was collected from the blood products application and patient records. We determined the concordance rate between the blood products prescriptions and the recommendations of good practice of the high authority for health. This rate is defined by the ratio between the number of transfusion acts in accordance with the recommendations and the number of transfusions during 2016.
RESULTS
Among 1,550 hospitalized neonates in Neonatology in 2016, 111 neonates (7%) received at least one blood product with a total of 229 blood products (2.06 blood product/newborn). Packed red blood cells (PRBC) were the most transfused products (47.5%) followed by packed platelets (PP) (38.4%) followed by fresh frozen plasma (FFP) (13.9%). In terms of indications, we found concordance rates of 79.82% for PRBC and 100% for PP and FFP. As for the transformations and qualifications of the blood component, the concordance rates were 54.13% for PRBC, 75% for PP and 100% for FFP.
CONCLUSION
Our approach is part of a policy of evaluation of good practices of blood transfusion which represents an important lever of action in the control and management of transfusion risks. We have reached a satisfactory rate of compliance with HAS recommendations. The transfusional attitude adopted within the neonatology department is rather restrictive. The non-conformities detected are either a prescription motivated by clinical signs of anemia intolerance with a hemoglobin level above the recommended thresholds or the non-application of a recommended reason for logistic contractions.