URINE OUTPUT IS NOT A GOOD CLINICAL PARAMETER FOR HEMODINAMIC ASSESSMENT IN VERY LOW BIRTH WEIGHT NEONATES


1Department of Pediatrics, Ribeirão Preto School of Medicine, University of São Paulo, Brazil

Background

- The assessment of hemodynamic status of the preterm neonates remains a challenge. Although blood pressure is still used as a parameter of the circulatory failure, neither an appropriate threshold value nor better outcomes after treating hypotension were found.
- Several methods of diagnostic measures have been investigated, such as functional echocardiography, serum lactate, base excess, capillary refill time and superior cava vein flow.

Objective

- To analyse the specificity and sensibility of urine output to adverse outcomes and use of inotrope.

Methods

- Retrospective study.
- Included: preterm infants < 1500g born in 2016 and 2017 and did not die at delivery room nor had malformations.
- Excluded: missing data.
- To determinate through a ROC curve the sensitivity and specificity of urine output in the first 24 and 48 hours the newborn that developed adverse outcomes or were prescribed inotropes.
- Death within the first 10 days of life or pulmonary hemorrhage.
- R software version 3.4.2 was used for the statistical analyzes.

Results

- Included: 233.
- Mean of gestational age and birth weight: 29,1 weeks and 1030,7 grams.
- No value with good specificity and sensitivity for death within the first 10 days of life, pulmonary hemorrhage and use of inotropes were found.
- All the areas under the curve were below 0,7.
- The sensitivity for urine output in the first 24 hours above 4ml/kg/min was 86% and specificity was 23% for death within 10 days of life.

Conclusion

- No single clinical or biochemical parameter was found to be a good marker for preterm shock.
- The subjective clinical and biochemical evaluation together continue to be standard to determinate the use of inotropes.