Assessment of Pulse Oximetry Screening Trends in AEPC

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Introduction: Critical congenital heart diseases (CCHD) are conditions in which neonates require surgery intervention in the first weeks of life to survive. Thus, early detection is an urgent clinical priority. Despite prenatal ultrasound examination and postnatal physical examination are performed for screening, a great number of cases remain undetected. Pulse oximetry screening has been adopted in several countries as an adjunct to postnatal examination in order to improve the detection rate and clinical outcomes.

Aim of the study: To assess current practice of screening methods for critical congenital heart diseases in Europe, mainly focusing on pulse oximetry screening trends.

Methods: An internet-based questionnaire was forwarded to the Ordinary and Junior Members of the Association for European Paediatric and Congenital Cardiology. Questions were focused on prenatal echocardiogram, the details of pulse oximetry screening practice and the providers’ opinions regarding pulse oximetry implementation.

Results: Total 160 responses were received from 35 different European and 12 non-European countries. Foetal echocardiography is performed in almost all hospitals (90.6%) mainly on selected foetuses with higher risk of developing congenital heart disease (86.2%). More than half of the providers use pulse oximetry screening for CCHD (68.1%), however, there is no consensus regarding oxygen saturation cut-off level and the timing of the measurement. The majority of responders (91.3%) are interested in the implementation if a European guideline existed.

Conclusion: In Europe, pulse oximetry screening for CCHD has grown in its acceptance, yet clinical practice in its application may vary among countries and hospitals. Some providers are waiting for the general consensus to adopt pulse oximetry screening for CCHD, which indicates the need for creating a universal European guideline.