PP121 Assessment Of Heart Rate Characteristics Analysis

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Introduction: The heart rate characteristics (HRC) analysis is a technique for predicting and monitoring neonatal infectious diseases in infants with a risk for infectious disease, such as sepsis, using the HRC index based on the electrocardiogram (ECG) data transmitted from a HeRO® device connected to an ECG monitor.
Methods: The assessments were performed via a systematic review. Searching five databases (KoreaMed, Ovid-MEDLINE, Ovid-EMBASE, and Cochrane) yielded 284 related studies. Two reviewers independently assessed the quality of these studies, using the Scottish Intercollegiate Guidelines Network checklist and the assessment results were described based on the results of the quality appraisal and level of evidence.
Results: The safety and effectiveness of the technique were assessed based on eight non-Korean studies (one randomized controlled trial (RCT), five cohort studies, one case-control study, one case series). The four studies that reported area under the curve (AUC) values, the timing of the analysis and AUC values (0.67– 0.75) were inconsistent among the studies. The elevation of the HRC index prior to the diagnosis of an infectious disease was not observed for meningitis or for multiple infectious diseases. In addition, although the group with additional monitoring using the technique had a significantly lower mortality rate, whether the HRC index had a direct impact on the infection prevention activities and the possibility of bias arising from the researchers' precautionary treatment based on the clinical symptoms and other test results as well as the actual time of disease onset are unknown.
Conclusions: Therefore, the committee presented the following recommendations based on the available evidence and expert opinion. HRC analysis is a safe technique for predicting and monitoring neonatal infectious diseases in infants with a risk for infectious disease, such as sepsis, using the HRC index based on the ECG data transmitted from a HeRO® device connected to an ECG monitor; however, further research is needed to determine its effectiveness (Level of evidence C, Technology category II-a).

PP122 The Feasibility Assessment For Domestic Introduction Of Newborn Pulse Oximetry Screening For Critical Congenital Heart Disease

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Introduction: Critical congenital heart disease (CCHD) refers to a group of heart defects that cause serious, life-threatening symptoms in the neonatal period and requires timely surgical or catheter interventions. We reviewed evidence for incorporating a mandatory neonatal CCHD screening test as a national public health project for all neonates born in Korea by analyzing the validity and cost-effectiveness of neonatal CCHD screening using pulse oximetry in Korea.
Methods: We performed a rapid literature review to establish models for the diagnostic accuracy and economic evaluation of pulse oximetry. Also, we analyzed the prevalence, mortality, and medical expenditure for different types of CCHD using the national health insurance (NHI) data. We analyzed the cost-effectiveness of pulse oximetry by comparing the group of neonates who received a combination of a physical examination and pulse oximetry, and group of neonates who only received a physical examination. For the cost-effectiveness analysis for the CCHD screening test in this study, we used a duration of one year, diagnostic accuracy as the clinical endpoint, and Life Year Gain (LYG) as the effectiveness indicator.
Results: We used recent systematic review he pooled sensitivity can be enhanced from 76.5 percent (pulse oximetry alone) to 92 percent (combined with physical examination). We used a total of 2,334 neonates with CCHD data for the economic model. Our analysis revealed that adding pulse oximetry to the routine neonatal physical examination leads to 2.34 of LYG and a cost difference of USD1,080,602, showing a ICER of KRW610,063,240 (USD461,857)/LYG.
Conclusions: Considering the benefit of LYG and cost of reducing the complications and after effects of newborns with CCHD who survived early diagnosis, it is considered to be worthwhile in Korea for a mandatory screening test.

PP124 Patisiran For Patients With Hereditary Transthyretin Amyloidosis (hATTR) With Stage 2 Polyneuropathy Or Who Have An Inadequate Response To Tafamidis

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Introduction: Hereditary Transthyretin amyloidosis (hATTR) is a rare autosomal dominant, multisystemic, progressive, and potentially fatal genetic disease. Currently, the only drug made available in the Brazilian National Health System to treat hATTR is tafamidis meglumine, indicated for symptomatic adult patients in early stage (stage 1) and not undergoing liver transplantation for amyloidosis associated with hATTR.

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