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ACOUSTIC ANALYSIS OF CRY SIGNAL TO DIFFERENTIATE HEALTHY AND CONGENITAL HEART DISORDER IN INFANTS

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ABSTRACT

The human body produces many signals that are related to different functions such as cardio logical and nervous systems. It is important that these biological signals be analysed for medical diagnosis and also for the study of various phenomena observed in the human body. The pathological conditions of the human body can be identified and explained through this analysis. Babies usually communicate their needs through crying, which is considered as a vocal signal. The variations in the cry can be related to different emotions such as hunger, pain, illness and discomfort. Research dealing with this relationship is termed as research in acoustic properties with the help of such research pathological states in infants, such as brain damage, cleft palate, hydrocephalus and sudden infant death syndrome (SIDS) were identified. The present work aims at estimating the jitter, shimmer, Signal to noise ratio, Noise to signal ratio, Autocorrelation and intensity from the cry signal of the infants with TOF, VSD, ASD, PDA (congenital) heart disorders by using PRATT software method and compared these results with normal cry signal of infants. Such parameters provide useful information in the early diagnosis of heart disorders in infants.

KEYWORDS: Infant Cry, Acyanotic Heart Disorder, Jitter, Shimmer