Epicardial Fat Thickness Among Neonates of Diabetic Mothers Attending Fayoum University Hospital at NICU Unit

Thesis

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ABSTRACT

Background: Epicardial fat thickness (EFT) in adults and children has been related to the metabolic syndrome and other cardiovascular risk factors; however, few studies have evaluated it in infants of diabetic mothers (IDMs) in whom, alterations in the thickness of the interventricular septum have been reported. This study compares the EFT in IDMs versus infants of non-diabetic mothers (INDMs) and its association with others echocardiographic parameters.

Aim of work: The aim of the work is to assess the epicardial fat thickness in neonates of diabetic mothers by Conventional Echocardiography, also we will assess myocardial function using Tissue Doppler Imaging (TDI) using tie index.

Patients and Methods: this study is a case control study which was conducted in neonatal and cardiology unit of Pediatric department at El-Fayoum University Hospital, Fayoum, Egypt from February to September. It included 54 neonates who were divided into 3 groups, 18 neonates of IDMs with well controlled DM, 18 neonates of IDMs with poorly controlled DM, 18 neonates of non diabetic mothers.

Results: Sensitivity and specificity test for Epicardial fat thickness in diagnosis of cases of IDM was 100% at cutoff value of (3.950) and for diagnosis of controlled from uncontrolled diabetic mothers the sensitivity was 66.7% and a specificity of (72.2%) at cutoff (5.100). with positive correlation between EFT and each of IVSD, IVSs, and ESPAP and a significant negative correlation with LVIDd, and LVIDs.

Conclusion: EFT is higher in IDM than in INDM with positive correlation with BW, IVSD, IVSs, and ESPAP and negative correlation with LVIDd, and LVIDs.

Key words: infant of diabetic mother, epicardial fat thickness, tissue doppler imaging.