primary studies - published, non RCT

Cystic fibrosis newborn screening: a pilot study to maximize carrier screening.

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Study design (if review, criteria of inclusion for studies)

Case-control study

Participants

33 patients with cystic fibrosis and 60 healthy children. Demographic information for both groups was recorded, and the disease severity in patients was assessed using the Schawachman criterion.

Interventions

M-mode, Doppler flow velocity, and Tissue Doppler Imaging echocardiography were performed for all participants

Outcome measures

The presence of heart disease in individuals with cystic fibrosis.

Main results

Our study encompassed thirty-three CF patients and sixty healthy children. The estimated pulmonary artery blood pressure (systolic and mean) in patients with cystic fibrosis was significantly higher than in the control group ($P < 0.05$). Additionally, the mean trans-tricuspid peak early to late diastolic flow velocity (E/A) was significantly lower in the case group than the control group ($P < 0.05$), along with a significantly lower mean tricuspid valve deceleration time (DT) ($P < 0.05$). Similarly, the mean TAPSE in the case group was notably lower than in the control group ($P < 0.05$). No significant difference in Mean left ventricular Ejection Fraction (EF) and Fractional Shortening (FS) existed between the two groups ($P > 0.05$). Furthermore, Trans-mitral peak early to late diastolic flow velocity (E/A) in the case group was significantly lower than in the control group (P

Authors' conclusions

Our study findings indicate the presence of some degree of right ventricular dysfunction in children with cystic fibrosis. This finding may have implications for the development or modification of clinical guidelines for managing cystic fibrosis in children. Further investigations are recommended to elucidate the underlying mechanisms and contributing factors, providing valuable insights for clinical management.

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See also

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Keywords

echocardiography; diagnostic procedures; non pharmacological intervention - diagn;