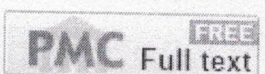
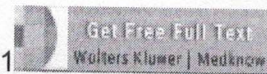


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Neonates with critical congenital heart defects: Impact of fetal diagnosis on immediate and short-term outcomes.

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Author information

Abstract

BACKGROUND: Fetal echocardiography is being increasingly used for prenatal diagnosis of congenital cardiac malformations, but its impact on the neonatal outcomes in low- and middle-income countries is still unknown.

AIMS: The objective of this study is to determine the impact of fetal echocardiography on immediate postnatal and short-term outcome in a tertiary pediatric cardiac center.

STUDY DESIGN: This is a prospective study.

MATERIALS AND METHODS: One hundred consecutive patients with critical congenital heart defects (CHD) requiring active medical or surgical interventions in the 1st month of life were included in the study. The detailed history, postnatal examination findings, and fetal echocardiogram report were recorded. They were divided into two groups as antenatally diagnosed and postnatally diagnosed. Pre- and post-procedural variables were compared between the two groups.

RESULTS: Twenty-nine neonates were diagnosed antenatally while 71 were diagnosed postnatally. Totally, 10 babies (34.5%) among the antenatally diagnosed group were delivered in a tertiary health-care setup. The mean age at presentation was 0 day in the antenatally diagnosed group while 10 days (0-30 days) in the postnatally diagnosed group ($P = 0.01$). A total of 17 (58.6%) patients in the antenatal group had duct dependent CHD, and 15 (88.2%) of these patients were transported on prostaglandin E1. In comparison, 19/34 (55.9%) patients in the postnatal group were transported on prostaglandin. The pH on admission in the antenatal group was 7.32 ± 0.05 as compared to 7.28 ± 0.05 in the postnatal group ($P = 0.0004$). There were 4 (5.6%) deaths in the postnatal group during transfer. There was no significant difference in the postoperative variables in both groups.

CONCLUSIONS: Fetal echocardiography identifies patients with complex CHD resulting in better parental counseling, thus facilitating delivery at a tertiary care center and preoperative stabilization. This results in improved preoperative mortality and better stabilization.