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Chromosomal abnormalities in Tetralogy of Fallot do not contribute to increased short term morbidity

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Background

There is an increased incidence of chromosomal abnormalities in TOF particularly 22q11 micro-deletion. Our aim was to determine the incidence of chromosomal abnormalities in our TOF population and assess their impact on short term morbidity.

Method

The medical records over a five year period from January 2007 to December 2011 were retrospectively reviewed. Ninety consecutive patients were included in the study.

Results

Antenatal diagnosis was made in 24.4%. The mean age at surgery was 5.2 months with a mean weight of 5.8 +/-1.5 kg. The mean hospital stay was 15.1 ±3 days including an intensive care stay of 4 ±4.1 days. Twelve patients were found to have a chromosomal abnormality out of which 9 (10%) were found to have a 22q11 micro-deletion. Other diagnosis included Trisomy 21, a partial duplication of chromosome 2 and a balanced pericentric inversion of chromosome 1. There was a significant increase in the finding of a disconnected LPA in those with a 22q11 micro deletion.Other co-morbidity included cleft palate (2) and umbilical hernia. Those with chromosomal abnormalities did not have a significantly longer hospital stay (17.5 days vs. 14.8 days, p=0.39). Multiple regression analysis revealed sepsis and chylothorax as significant factors prolonging hospital stay for the entire cohort, patients with 22q11 micro deletion did not have a significant increased incidence of wound infection or sepsis.

Conclusion

Tetralogy of Fallot is significantly associated with 22q11 micro-deletion , this association does not increase short term morbidity or duration of hospital stay.