

10 Year Review of Outcome of Fetal Arrhythmias in Wales

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Objectives: To evaluate the frequency, diagnostic features, clinical management and outcome of fetal arrhythmia.

Method: 2084 fetuses referred to the University Hospital of Wales for the last 10 years were included in the study.

Results: 208 fetuses had provisional diagnosis of fetal arrhythmia (10%). 194 fetuses had normal heart, and 14 showed structural cardiac abnormality. In 80 patients fetal arrhythmia had resolved spontaneously by the time of specialist cardiac scan. Arrhythmia had persisted in 128 patients; of which complete heart block (CHB) was detected in 16; supraventricular tachycardia (SVT) in 31; premature atrial contractions (PAC) in 67, and premature ventricular contraction in 7 fetuses. PAC later triggered sustained re-entrant tachycardia in two fetuses. 5 patients with PAC had adverse outcome; three with oligohydramnios died suddenly at term, and two with restrictive foramen ovale required emergency caesarean section at 38 weeks. 29 patients with sustained tachycardia received antiarrhythmic medications; and except for one all responded to digoxin and flecainide combination. 11 of 16 fetuses with CHB survived the pregnancy giving an intrauterine mortality rate of 30%. 8 patients had permanent pacemaker following birth.

Conclusion: Fetal arrhythmias are a common referral indication for fetal cardiac assessment. PACs are generally benign but if they are associated with oligohydramnios or restrictive foramen ovale outlook may be unpredictable requiring close follow up. SVT is better responds antiarrhythmic combination treatment, but CHB carries a substantial mortality.