

Intra-uterine foetal death: an avoidable diagnostic pitfall

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Summary: A case is presented where maternal tachycardia was misinterpreted as foetal heart activity on cardiography in a case of IUFD. Diagnostic implications and the use of real line ultrasound scanning are discussed.

CASE REPORT

A 27 year old booked patient, gravida 2 para 1, presented to the labour ward at 36 weeks gestation after failing to notice foetal movements for four days. The general practitioner had been unable to hear the foetal heart the day before and had advised her to attend for further assessment. Her antenatal course had been uneventful.

On examination she was extremely distressed. Her pulse rate was 140 beats per minute, blood pressure 120/80 mmHg, urinalysis negative. The uterine size was compatible with a 36 week gestation, presentation was cephalic, 3/5th palpable and there was a reduced amount of liquor. No foetal movements were noted during palpation. The foetal heart was inaudible with Pinard stethoscope. However an apparently normal foetal heart record was obtained by Doppler ultrasound over a 45 minute period of observation (Figure 1).

The patient was reassured and foetal assessment with twice daily cardiotocography was planned. Later that day however the foetal heart could not be detected by Doppler technique and real-time ultrasound scan confirmed an IUFD, with absent foetal heart activity, overlapping of the skull bones and loss of midline echo (Figure 2).

Labour was induced with vaginal prostaglandin gel and delivery of a severely macerated fe-

male infant weighing 2530 g ensued. A post-mortem examination revealed normal anatomy although many organs had undergone severe autolysis suggestive of longstanding IUFD. TORCH screen, auto-antibodies, blood sugar and bacteriological screening were all normal and the cause of death remained unexplained.

DISCUSSION

Since the observation by Sadovsky and Yaffe in 1973 that in cases of placental insufficiency where the foetus died, foetal movement decreased and stopped 12-48 hours before the foetal heart ceased to beat, there has been widespread adoption of maternal kickcounting as a screening test for foetal wellbeing.

Around 5% of women at either end of the 1Q scale are unable to fill in a "Count-to-10" chart (Pearson 1981) and in many cases of IUFD the mother has failed to attend for further assessment despite the absence of foetal movement for several days.

The clinical diagnosis of IUFD relies on the absence of foetal heart sounds although foetal heart activity may be pre-

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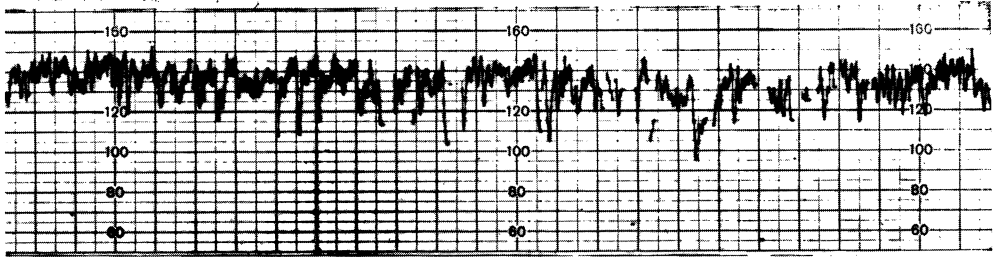


Fig. 1. — « Foetal » heart record obtained by Doppler ultrasound.

sent when assessed by direct ultrasound visualisation despite failure to detect it using both Pinnard stethoscope and Doppler technique (Driscoll *et al.* 1987).

Maternal vascular and cardiac activity may be misinterpreted as foetal in origin using Pinnard stethoscope, Doppler technique and Foetal scalp electrode, particularly in the presence of either foetal bradycardia or maternal tachycardia.

Maternal tachycardia recorded by the Doppler technique was misinterpreted as foetal heart activity, resulting in the double blow of false reassurance followed by

the news some hours later that “the baby had died”.

Ultrasound diagnosis of foetal death is recognised by an absent fetal heart pattern, skull collapse, a poorly visualised midline falx echo and retraction of brain tissue (Tindall and Reid, 1989).

A real-time ultrasound scanner is found in most labour wards and junior obstetric staff are becoming increasingly familiar with its use. In all cases of suspected IUFD, particularly in cases with associated maternal tachycardia, its immediate use to confirm the presence or absence of



Fig. 2. — Ultrasound scan of foetal skull confirming longstanding IUFD.

foetal heart activity would prevent avoidable misdiagnosis and unnecessary mental trauma at such a difficult time.

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