the health care staff. Currently, however, the health equipment industry is against the concept of supplying sophisticated equipment to, for example, intensive care units or other near-bedside users who do not have technical support from laboratory doctors.

Whether or not the industry does devise the necessarily foolproof ways of doing the more routine tests close to the patient, the performance of a laboratory will continue to be judged by the range and quality of the service it offers to the clinician in particular and to the community in general in diagnosing and preventing disease.

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Lesson of the Week

Fetal subdural haemorrhages presenting as hydrocephalus

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Ultrasonic measurement of fetal biparietal diameter and abdominal circumference is now widely used to assess gestational age. A discrepancy between head size and abdominal girth may suggest hydrocephalus. We report on a fetus with a large head caused by subdural haemorrhages born to a woman taking an anticoagulant.

Case report

An 18-year-old woman had been taking warfarin since mitral valve replacement at the age of 16 years. She was first seen at 32 weeks by dates into her second pregnancy. Hydramnios was noted, and ultrasound examination showed a fetal biparietal diameter of 10.4 cm (normal values 8.6 ± 0.4 cm, mean $\pm$ SEM). Fetal abdominal circumference was 31.3 cm (normal 28.5 ± 2.5 cm). Repeat examination the following week gave the same measurements, and spontaneous labour and delivery occurred shortly afterwards. The infant weighed 2700 g, gestational age was assessed at 34 weeks, and head circumference was 35 cm. There was extreme pallor, tachycardia, and hepatomegaly. The infant died three hours later and necropsy showed large bilateral subdural haemorrhages.

A large head on a fetus may indicate intracranial haemorrhage secondary to anticoagulant treatment of the mother.

Comment

The risk to the fetus of bleeding or possible malformation when the mother is taking anticoagulants is weighed against the risk to the mother of thromboembolism if anticoagulants are withdrawn. A change in treatment from oral anticoagulants to heparin is usually recommended to avoid maternal or fetal bleeding at delivery. Opinions differ about when this change-over should be made: at the end of the first trimester,¹ at the onset of labour,² or at other times.^{3,4} If a woman is receiving treatment with oral anticoagulants the possibility of subdural haemorrhage should be considered in the differential diagnosis of a large fetal head, and this should be investigated by detailed ultrasound studies.

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