half received methohexitone, thereby controlling for this factor.

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Anaesthesia and thalidomide-related abnormalities

We were interested to read Dr J.W. McCrory's letter (*Anaesthesia* 1988; **43:** 613–14) on the provision of anaesthesia for a patient with thalidomide phocomelia. We were recently asked to provide anaesthesia for a patient for Caesarean section with deformities similar to Dr McCrory's patient. We also were unable to find reports in the literature which might help us with the anticipated problems.

Our patient was 25 years of age; she had a normally developed head and trunk, no arms or legs and small, deformed and rotated feet. Her hands were underdeveloped, and grow directly out of her shoulders, but they are large and mobile enough to be useful limbs. She was moderately obese; the total length of her trunk and head was 76 cm, and her normal weight was 54 kg; this increased to 70 kg in late pregnancy. She had a visible and palpable vein on the dorsum of her right hand, which was adequate for venesection for pathological tests, and a rudimentary vein on the dorsum of one foot. She was referred to one of us in early pregnancy for assessment of the likely anaesthetic difficulties. It had been already decided, in view of likely pelvic abnormalities, that she should be delivered by elective Caesarean section shortly before term. She had undergone anaesthesia several times as an adolescent; on one occasion the vein on her foot had been used for induction, and on other occasions the right internal jugular vein had been used. We were unable to obtain records of these anaesthetics.

It was found at the time of her referral that her arterial blood pressure could be easily estimated by using the paediatric cuff of a noninvasive automatic sphygmomanometer on her right hand. Also, a conventional paediatric sphygmomanometer cuff used with a carbon microphone pulsemeter gave a reading of systolic pressure in close agreement with the systolic pressure measured with the Dinamap. The cuff and pulsemeter were used at her antenatal appointments, and we decided to use the Dinamap at her delivery. The paediatric cuff was kept with the Dinamap in the labour ward throughout the last trimester of her pregnancy. She was undecided at this stage whether she would prefer general or epidural anaesthesia for her delivery; she was warned that epidural analgesia might present some difficulties.

Her pregnancy proceeded uneventfully until her membranes ruptured spontaneously at 36 weeks' gestation. Contractions did not begin immediately, but as the pregnancy was near term it was decided to proceed to immediate Caesarean section. She decided on epidural analgesia, and we agreed to attempt this.

Attempts were made to cannulate her two visible veins; the vein in the hand had been used recently to obtain blood for cross-matching and was obscured by a haematoma, and the vein in the foot proved too small for an adequate cannula. Attempts to cannulate the foot vein proved painful and distressing to the patient and resulted in involuntary movement of her foot. We then decided to attempt cannulation of the right internal jugular vein. Considerable thought had been already given to the choice of a suitable catheter for this route; conventional cannulae or catheters were felt either to be too long and narrow to permit adequate flow for volume loading or fluid replacement, or too short to permit adequate stability within the vein. We decided to use an 8-FG catheter introducer and this was inserted into the internal jugular vein under local anaesthesia with no difficulty. A warmer was included in the infusion set in case rapid administration of fluid became necessary.

A 16-G Tuohy needle was inserted without difficulty at the L_{3-4} interspace, and a catheter was introduced into the epidural space. Plain bupivacaine (0.5%) was injected incrementally to a total of 25 ml, to give a block to T_6 within 45 minutes. A total of 2 litres of compound sodium lactate solution was infused during this time, and her blood pressure remained stable. A live female infant was delivered; after delivery the mother developed some discomfort, and two intravenous doses of 5 mg of papaveretum were given.

This case was satisfactory but we were lucky because our patient seems not to have any spinal abnormality that would preclude epidural analgesia. An antepartum haemorrhage, had it occurred, would perhaps have caused considerable difficulties in emergency venous cannulation; we were fortunate in that she presented to us normovolaemic and well hydrated.

Like Dr McCrory, we were a little surprised at the lack of information in the literature on the anaesthetic management of these patients. We knew our patient had had several previous operations. It is also known that several thalidomide phocomelics have recently been delivered of babies. Presumably, as this small but significant population gets older more operative procedures will be required. The problems in these patients of anaesthesia for, for example, cardiac or vascular surgery would appear to be daunting. Colleagues who have given anaesthetics to these patients should publish their experiences.

In addition to this patient, and this may be mere coincidence, we have in the last 5 months provided anaesthesia for Caesarean section for an achondroplastic dwarf and for a patient with the sequelae of Still's disease who also has sickle-cell trait (this latter patient will be the subject of another case report). Pregnancy will be increasingly desired by people with severe disabilities. Nobody could disagree with the process of making more things possible for such people. However, in some people with such disabilities pregnancy can be a life-endangering condition, as severe haemorrhage would have been for our patient. She was well aware of the dangers, and accepted them cheerfully, but we consider that, as in this case, early assessment and counselling of the patient are an important part of the anaesthetic management, together with the assembling of a team with the right skills and the right equipment well in advance of the time of the delivery.

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