CORRESPONDENCE

ANAESTHESIA IN PATIENTS WITH SICKLE-CELL ANAEMIA

Sir,—We were very interested to read Dr. R. A. Browne's article on this subject (Brit. J. Anaesth. (1965), 37, 181) and feel that a case which we were requested to anaesthetize might be worthy of comment in this connection.

The patient was a West Indian woman, age 27 years, gravida-4 with a long history of sickle-cell anaemia, for which she had received alkalai plus blood transfusions. She was admitted following an episode of sickling, with multiple pulmonary thromboses, at the 36th week of pregnancy, and had such poor respiratory function that she had to be nursed in an oxygen tent. It was felt that her only hope of survival was an immediate Caesarean section plus sterilization.

The patient, when first seen by the anaesthetists, was in an oxygen tent and, despite the presence of obvious respiratory distress, her mucous membranes were pink. At this stage it was very difficult to decide whether the respiratory troubles were due to a super-added cardiac failure or solely due to thrombotic phenomena in the lungs. This case posed a number of grave problems from the anaesthetic point of view:

(i) The enormous reduction in functioning lung volume.
(ii) There were recurrent crises due to further pulmonary thrombosis.
(iii) The need to avoid anoxia in any form for even a short period, as this would precipitate further sickling and embarrass an already anoxic woman and baby.
(iv) The added difficulties in controlling respiration due to the abdominal mass (pregnant uterus).
(v) The need to maintain blood pressure due to danger of local thrombosis.
(vi) Whether blood transfusion would be advantageous or not, balancing the advantages of adding haemoglobin against the disadvantages of overloading the circulation in the presence of anaemia and potential or actual cardiac failure.

In the case under discussion, as very little haemorrhage occurred during the Caesarean section, no blood was given.

The anaesthetic was as follows. The patient was transferred from the oxygen tent on the ward to the operating theatre in a sitting position, still receiving continuous oxygen by BLB mask. Marked orthopnoea was present. She was allowed 5 minutes to settle down in the anaesthetic room, receiving oxygen from the anaesthetic apparatus, which she took greedily. Induction of anaesthesia was carried out in the sitting position, 250 mg 2.5 per cent thiopentone being given very slowly intravenously followed by 50 mg suxamethonium. The trachea was intubated with a 9-mm cuffed tube. Inflation of the lungs was very difficult due to low compliance. The patient was put into the horizontal position. When muscle tone returned, 30 mg tubocurarine were given. The patient was positioned on the operating table and the surgeons carried out a rapid Caesarean section and sterilization. It was noted that after delivery of the baby the compliance was slightly improved. The muscular relaxation was reversed with atropine 1.25 mg and neostigmine 2.5 mg. When adequate respiration and cough reflex were present, she was extubated, and returned to the recovery ward on continuous oxygen, given initially by mask, later by Tudor Edwards spectacles. In the recovery ward a blood pressure and pulse record was kept. Regular chest physiotherapy with breathing exercises and leg movements were carried out.

We feel that this case is of interest partly of itself and partly because this condition is likely to become more common during the next few years, due to the increase of immigrants who carry the genes of sickle-cell anaemia.

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MANCHESTER MEDICAL SOCIETY: SECTION OF ANAESTHETISTS

Session 1965/66

1966

JANUARY 27
Dr. J. Anderton
"High altitude anaesthesia"
Dr. A. Shaw

FEBRUARY 24
Symposium on Neuropharmacology
Professor A. D. MacDonald
Professor H. Schneiden
Dr. A. R. Hunter
Dr. J. Hoenig

1966

MARCH 24
Dr. J. A. Thornton (Sheffield)

APRIL 28
Joint Meeting with the Liverpool Society of Anaesthetists, to be held in Manchester

All meetings will be held in the Clinical Sciences Building, York Place, Manchester 13, at 8 p.m.