Neonatal Haemothorax—A Report of 2 Cases

J. P. GRAUSZ and D. R. HARVEY

From the Nuffield Neonatal Research Unit, Institute of Child Health, Hammersmith Hospital, London W.12

Haemothorax as a sole manifestation of haemorrhagic disease seems very rare. Only 3 published cases have been recorded (Mahon and Verger, 1953; Schukowski, 1903; Josten and Haupt, 1956). We have seen 2 other cases in the past 2 years.

Case Reports

Case 1. A West Indian male infant was 2940 g. when born at 41 weeks' gestation. His mother was 20 years old, para 2, and the present pregnancy was uneventful except for a hookworm infection. There is no family history of bleeding.

At delivery the cord was wound tightly around the baby's neck. At 1 minute of age, the heart rate was 100/minute, and he was gasping, limp, and white, but he soon started to breathe normally and became pink, without any resuscitative measures.

When 60 hours old he was found to be very pale, with a respiratory rate of 80–90/minute and a heart rate of 170/minute. The breath sounds were harsh bilaterally and the cardiac dullness and impulse had shifted to the right. The chest *x-ray* film showed right basal collapse with emphysema superiorly. Hb 8.9 g./100 ml. and it rose to 13.6 g./100 ml. after an exchange transfusion. Blood oozed continuously from puncture sites and the umbilicus, but the bleeding tendency ceased 3 hours after an intramuscular injection of 2 mg. vitamin K₁.

At 72 hours his general condition was much improved, but the respiratory rate was at times over 100/minute. Clinical examination revealed no abnormal signs, but a chest *x-ray* picture showed an effusion in the left chest. Thoracentesis was performed and 30 ml. of pure blood which failed to clot were aspirated from the left chest.

A pneumothorax produced by the aspiration resolved rapidly, and a week after the episode the chest *x-ray* picture was normal. There was no further bleeding.

Case 2. A West Indian male infant was 3520 g. when born at 41 weeks' gestation. His mother was 32 years old, para 5, and had a normal pregnancy. There is no family history of bleeding.

When the membranes ruptured the liquor was found to be meconium stained and during delivery the heart rate fell to 110/minute. At 1 minute of age the infant

was still cyanosed but otherwise in good condition and soon appeared entirely normal. No resuscitative measures were needed. At 78 hours, laboured respirations with costal retractions and grunting had developed; the baby was pale and slightly cyanosed and the peripheral pulses were poor. On examination of the chest there was dullness to percussion and quiet breath sounds on the right. This evidence of fluid was confirmed by a chest *x-ray* film. Hb 23.5 g./100 ml. one hour after he became ill.

The baby was placed in 100% oxygen for 20 minutes, and as there was no improvement, thoracentesis was performed. This produced 40 ml. of blood which clotted slowly on standing. He was then given an intramuscular injection of 5 mg. vitamin K₁, and 120 ml. of packed cells were transfused via an umbilical artery in 10 minutes. His general condition improved considerably, but he continued to ooze blood freely from heel puncture, injection, and thoracentesis sites until two hours after the vitamin K₁ injection. Topical thrombin applied over the thoracentesis puncture was ineffective in preventing oozing. Within the next 24 hours a further 10 ml. blood were removed because of raised respiratory rate. Following the cessation of oozing, there was no further recurrence of the haemothorax. Chest *x-ray* film showed complete resolution 1 week after the bleeding episode.

Discussion

Although we have no data on the defect in clotting mechanism, there is strong clinical evidence for the diagnosis of haemorrhagic disease of the newborn. The timing of the bleeding was appropriate, birth asphyxia is known to be a predisposing factor, there was prolonged oozing from puncture sites and the umbilicus, and the bleeding ceased after administration of vitamin K₁.

Summary and Conclusions

Two infants who presented on the third day of life with haemothorax are described.

These cases underline the principle that any newborn baby with respiratory distress should

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have a chest x-ray examination to make an accurate diagnosis.

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REFERENCES

- Josten, E. A., and Haupt, H. (1956). Hämatothorax bei einem Neugeborenen. *Kinderärztl. Prax.*, **24**, 204.
- Mahon, and Verger (1953). Maladie hémorragique et hémopneumothorax du nouveau-né. *J. Méd. Bordeaux*, **130**, 917.
- Schukowski, W. (1903). Ein Fall von Haemothorax nicht traumatischen Ursprungs bei einem Neugeborenen. *Jb. Kinderheilk.*, **58**, 319.