

NECROSIS OF THE SPLEEN IN A CONGENITAL DIAPHRAGMATIC HERNIA

REPORT OF A CASE *

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Diaphragmatic hernia through the foramen of Bochdalek is now a well-recognised condition and is fully described in books on paediatric surgery, (Gross,¹ Swenson,² Grob³). That the spleen may be found within the chest in a left-sided hernia is also well known but I have been unable to find any reference to torsion or necrosis of the spleen complicating a neonatal diaphragmatic hernia. The following case is therefore described.

E. B. (58/15228), a male infant aged 2 days, was admitted to the Hacettepe Children's Hospital on December 14th, 1958 because of cyanotic attacks following feeding. There had been no vomiting nor regurgitations and the pregnancy and delivery had been normal. On examination this was a healthy-looking infant weighing 2700 gm and, apart from crepitations in the left thorax, no obvious abnormality was found. A radiograph of the chest showed a number of "cavities" in the left upper zone which were at that time thought to be abscess cavities. A tentative diagnosis of Staphylococcal pneumonia was made. The baby was therefore treated with antibiotics and the condition remained satisfactory.

The day after admission bowel sounds were heard in the left chest and a lipiodol swallow was therefore carried out which showed coils of intestine within the thorax. The "cavities" previously seen were obviously gas shadows in the intestine.

The baby had a further severe cyanotic attack the following day and immediate operation was decided upon.

Under general endotracheal anaesthesia (Dr. E. Berker) the abdomen was opened through a high left rectus-splitting incision and it became obvious that the intestine from the upper jejunum to the descending colon had herniated into the pleural cavity. The foramen of Bochdalek was wide open and measured 2 cm x 3 cm.

By applying gentle traction the intestine was gradually pulled out of the thorax without any difficulty but when all the intestine had

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been delivered into the abdomen it became obvious that the spleen was still in the thorax. It could be felt to be firmly adherent to the posterior chest wall and could not be separated by blunt dissection. The splenic pedicle was very long. It was therefore decided to convert the incision into a thoraco-abdominal one by dividing the costal margin and opening the ninth intercostal space.

The spleen was greenish brown in colour, about 4 cm in diameter and firmly adherent to the posterior parietal pleura and to the lung. It had to be mobilised by sharp dissection and in doing so a cavity was opened containing some 3 cc of green fluid (presumably altered blood). The splenic pedicle was therefore ligated and divided, after ensuring that the tail of the pancreas was well clear of the ligature, and the spleen was removed. The defect in the diaphragm was closed with interrupted silk sutures and the chest and abdomen were closed in layers. A tube (underwater) drain was placed in the pleural cavity through a stab incision.

During the operation 75 cc of blood were given and the baby's recovery was uneventful. Post-operative haemoglobin estimations and reticulocyte counts were within normal limits; presumably the removal of a necrotic spleen would not affect the reticulocyte count. The drain was removed on the 4th post-operative day and the baby left hospital on December 31, 1958, weighing 2870 gm.

The baby was readmitted a few days later suffering from a right-sided bronchopneumonia which responded rapidly to antibiotic therapy. When last seen at the age of one month, he was well and gaining weight.

Histological examination of the spleen confirmed necrosis following infarction.

Discussion

Although no definite twist in the splenic pedicle was seen, it was felt that the spleen had undergone torsion which had then caused necrosis. The long splenic pedicle resulting from the spleen's position in the chest would favour torsion. As the spleen was so firmly adherent to the chest wall, I feel that the torsion must have occurred some days before operation and may well have taken place antenatally or during birth.

R E F E R E N C E S

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2. Swenson, A.: *Pædiatric Surgery*, 196. Appleton-Century-Crofts, Inc., New York, 1958.
3. Grob, M.: *Lehrbuch der Kinderchirurgie*, 296. Georg Thieme, Stuttgart, 1957.