

DUODENAL PERFORATION IN AN INFANT

Report of a Case*

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Although gastrointestinal ulcers are not infrequently found in infants, perforations in this group are rare. Up to 1955 only some 30 such cases had been reported in the literature.³ The last of these was a case of G. G. Arnold's; a premature infant delivered by Cesarean section in whom a perforation was found five days after birth. In 1942 Guthrie performed 6,059 postmortem examinations and found only 9 cases of perforation, 6 of which were in infants under three months old.² Between 1938 and 1948 Mavrelis and Polsen² performed 17,503 postmortem examinations in the course of which they found 2,319 peptic ulcers, 14 of them perforated. Nine of the perforations were found in the stomach, 5 in the duodenum. In 1941, Bird, Limper and Mayer published an excellent review of the literature on ulcers in infants and included the youngest successful case recorded: a baby with a perforated duodenal ulcer, who was only 34 hours old.

The honor of performing the first successful operation on an infant with a perforation belongs to Selinger. Subsequently several other babies have survived similar operations, which are primarily the sewing of the perforation. Success in such cases depends to a great extent upon making a rapid diagnosis, for which purpose roentgenography is indispensable.

Numerous causes of perforation in infants and children have been suggested among which are: gastrointestinal ulcers (perforations are usually, but not always, associated with ulcers), atresia of the pylorus or duodenum, defects in the stomach musculature, gavage, neonatal asphyxia, embolism, thrombosis, vascular disease, sepsis, treatment with ACTH and cortisone, hematoma and the increased stomach acidity commonly found shortly after birth.^{1,2,3}

Symptoms of perforation include: shock, distention of the abdomen which cannot be relieved by gastric aspiration or lavage, melena and hematemesis. Roentgenography will generally reveal free air in

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the abdomen and under the diaphragm. The condition is usually fatal in from three to thirty-six hours without surgical intervention.

Case Report

M. K. was admitted to Hacettepe Hospital on March 31, 1958, aged 2 months and 20 days. Chief complaints were fever, cough and lesions on face and legs; diagnosis was infection of the upper respiratory system and seborrheic dermatitis. Dermatitis had been present for a month and a half. The birth had been normal with no asphyxia cyanosis and the baby had been breast fed. Treatment with Terramycin and, locally, with boric acid was instituted.

On April 3 melena appeared. The next day direct right lung and abdomen roentgenography was ordered following hematemesis. The abdomen was excessively distended, there was bleeding under the skin of hands and feet and rales were heard in the lungs. The roentgenogram showed free air under the diaphragm, a diagnosis of perforation was made and surgery ordered.

Laparotomy of the first part of the duodenum in a place near the pylorus revealed a perforation some 3-4 mm. in diameter. The perforation was sutured and the omentum was closed. The pus present in the abdomen was aspirated and the abdomen washed with a normal saline solution. Penrose drains were placed both in the Douglas and around the pylorus and a solution of penicillin and streptomycin was poured into the abdomen which was then closed. During the operation 20 cc. of blood were given. After the operation a cut-down was done and 50 Ringers solution plus 250 cc. of 5 per cent dextrose plus 5 mEq KCl were given. As antibiotic 1,000,000 units of crystallized penicillin were given intravenously every day together with 10 mgr. of vitamin K and 100 mgr. of vitamin C intramuscularly. On three occasions after the operation 20 cc. of blood were given. Every hour the stomach was aspirated with a catheter and for the first two days the blood thus drawn off was thick and dark. Bleeding stopped on the third day although rales were still present in the lungs. The general condition of the patient became bad on the morning of the third day and in spite of every effort she died. The cause of death was pneumonia; autopsy showed that the perforation was completely closed. The cause of the perforation was unknown and no ulcer was found.

Summary

A duodenal perforation in a 2 1/2 month old baby was presented. The value of roentgenography in the diagnosis of perforation was emphasized.

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