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MEDICAL MEMORANDA

Late Appearance of Bochdalek Hernia

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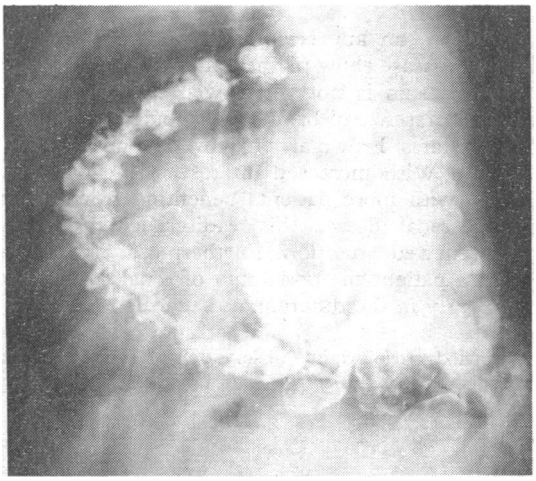
A case is reported in which a diaphragmatic hernia of the congenital posterolateral (Bochdalek) type appeared after intra-abdominal surgery in a 5-year-old. This supports the view that hernias of this type which present after the newborn period are caused by herniation occurring after birth through a defect present since the embryonic stage.

Case Report

A 5-year-old boy was admitted to the Royal Manchester Children's Hospital with a history of breathlessness and intermittent left subcostal pain of about eight weeks' duration. His symptoms had initially been mild but during a few weeks before admission he had occasional episodes of vomiting and his breathlessness increased. The symptoms began after an ileal loop urinary diversion had been constructed because of urinary incontinence due to a thoracolumbar meningomyelocele. This had been performed through a left paramedian incision. The ureters had been mobilized easily and the loop formed from a part of the terminal ileum. He developed a postoperative paralytic ileus lasting two days, during which time his abdomen became noticeably distended. This settled with conservative treatment and he was discharged 10 days later. It was during this convalescent period at home, when increasing mobilization was being attempted, that his breathlessness was first noted.



Lateral view of chest after barium meal.

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At the time of admission he was noticeably breathless on exertion though not unduly distressed at rest. He was found to have decreased chest expansion with increased dullness and diminished breath sounds on the left side. Bowel sounds were audible over the left hemithorax.

The chest *x*-ray picture was suggestive of a left diaphragmatic hernia and this was confirmed by a barium-meal examination, which showed a loop of colon in the chest (see Fig.). Chest *x*-ray appearances before the urinary diversion had been normal.

Operation was performed through a left subcostal incision and a posterolateral diaphragmatic hernia was found. A large loop of colon was withdrawn from the chest and the defect was noted to be a patent pleuroperitoneal canal with smooth margins. Only a narrow opening remained after the bowel had been withdrawn. There was no tear in the diaphragm and no hernia sac. The defect was closed with interrupted silk sutures. Both lungs expanded well after the operation and there were no postoperative complications.

Comment

Nearly all congenital diaphragmatic hernias present in the first days of life as a severe respiratory emergency, but they may present in later childhood or even adult life, when they usually produce chronic respiratory or gastrointestinal symptoms. Others remain asymptomatic and are found in the course of routine *x*-ray examination of the chest. Hernias of the Bochdalek type presenting in later life should be differentiated from traumatic diaphragmatic hernias where the defect, although commonly posterolateral, is due to a tear in the diaphragm (Lucido and Wall, 1963; Robb, 1963; Myers, 1964). In a case reported by Fromm and Lucas (1971) it was stated that a previously normal chest *x*-ray picture was one factor which precluded the possibility of a congenital Bochdalek hernia. In so far as the term congenital applies to the defect in the diaphragm this is not necessarily so.

In the case described here the hernia was through a patent pleuroperitoneal canal, which is the commonest abnormality associated with congenital diaphragmatic hernias. It was a false hernia with no sac, the parietal pleura and peritoneum being continuous.

It seems likely that the factors responsible for the herniation were largely related to the postoperative paralytic ileus. The abdominal distension with the increased intra-abdominal pressure probably caused the narrow defect to widen and the bowel to herniate into the chest. Contributing factors may have included the disturbed relationships of the intra-abdominal contents during and after the urinary diversion procedure and the possibility of some degree of postoperative lung collapse.

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