

the pharynx in the region of first and second bronchial arches. Palatine tonsil also has its origin from the ventral portion of the second endodermal pouch(3). The aberrant position of the ectopic thyroid tissue in the tonsillar region can thus be easily explained.

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Bilateral Congenital Eventration of the Diaphragm

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Eventration of the diaphragm is a condition characterized by an abnormally elevated diaphragm which is attenuated but otherwise intact. Thomas(1) has classified eventrations into two types: congenital or non-paralytic and acquired or paralytic. Congenital eventration is due to incomplete muscularisation of the diaphragm while the acquired variety usually results from injury to phrenic nerve. Eventrations, both congenital and acquired, are usually unilateral. We report a case with bilateral eventration

which is an extremely rare condition, associated with high mortality.

Case Report

A male baby was born to a 28-year-old, second gravida mother by Cesarean section at 37⁺⁶ weeks of gestation. Antenatal period was uneventful. The infant weighed 2940 g at birth and had Apgar scores of 6 and 8 at 1 and 5 minutes, respectively. He developed respiratory distress with marked subcostal recessions soon after birth. Chest radiograph showed both domes of the diaphragm to be abnormally elevated (*Fig. 1*) and ultrasound revealed a thin intact diaphragm. Over next few hours, his condition worsened necessitating ventilatory support. There was a marked improvement clinically and a repeat radiograph showed the diaphragm to be in the normal position. While on the mechanical ventilator, he developed *Acinetobacter anitratus* septicemia with pneumonia and was treated with cefotaxime and amikacin. Numerous attempts to wean him off the ventilator were unsuccessful. Later, his respiratory function deteriorated with recurrence of pneumonia. Blood culture was positive for *Canadia albicans*. He was treated with oral itraconazole initially and amphotericin B later. However, he continued to

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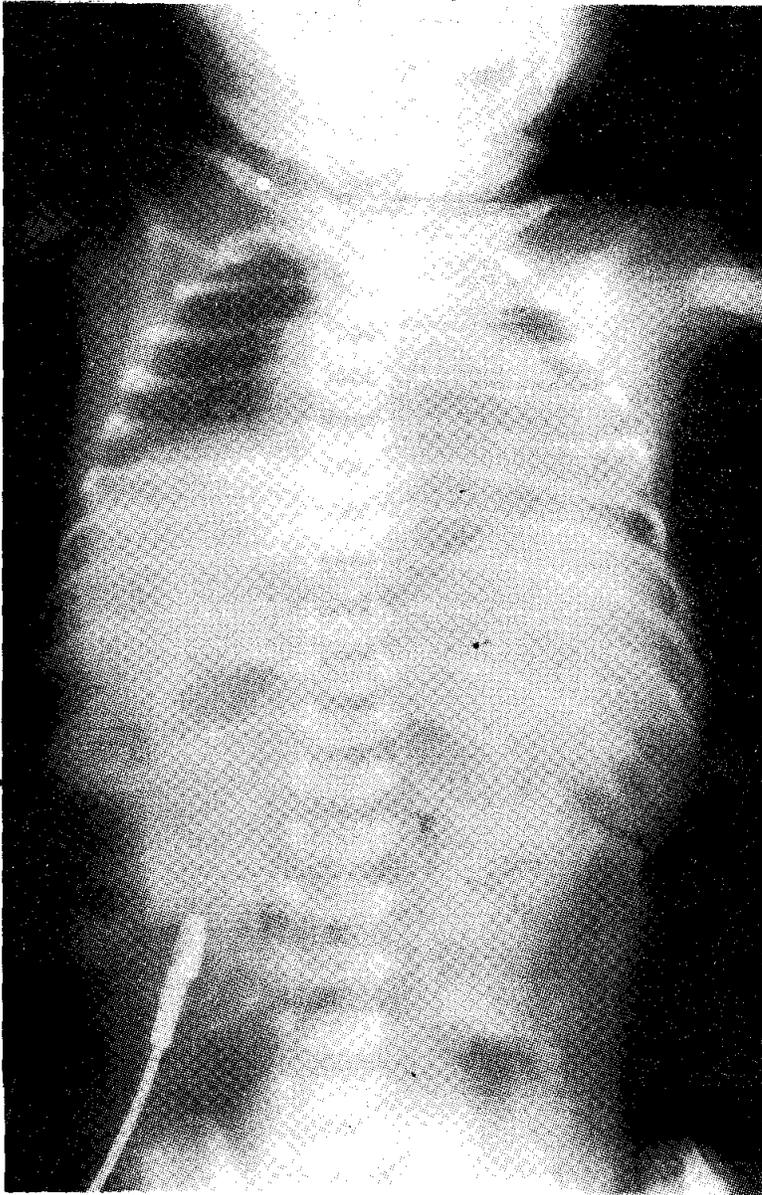


Fig. 1. Chest radiograph demonstrating bilateral eventration of the diaphragm.

deteriorate and died on 60th day. At autopsy, the entire diaphragm was found to be thin and membranous with few strands of muscle fibres in the periphery (*Fig. 2*). No other abnormality was found.

Discussion

Embryologically, the diaphragm is derived from four elements: the septum transversum, the two pleuroperitoneal membranes, the mesentery of the esophagus

and the muscular components(2). It is the lack of, or inadequate muscularization that results in congenital eventration. Associated abnormalities in other organ systems that are simultaneously developed, mainly the respiratory and alimentary, account for the considerable mortality and morbidity associated with the condition.

Majority of the eventrations are unilateral and may remain asymptomatic. Bila-

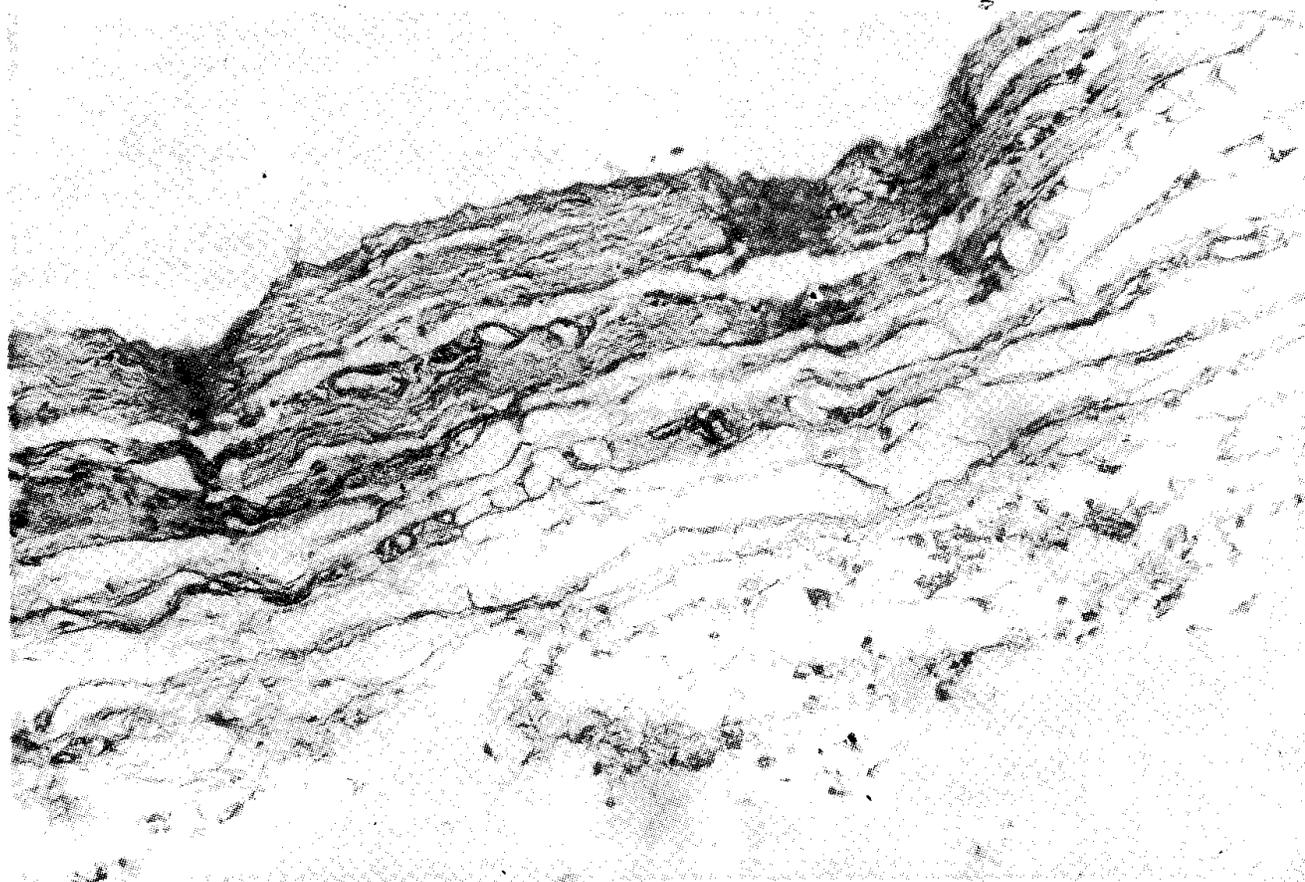


Fig. 2. Photomicrograph showing the diaphragm to be devoid of any muscle tissue. (E & H $\times 140$)

teral eventrations are extremely rare. Rogers and Hawk could identify only 28 cases of bilateral eventration in the English literature(3). Unlike unilateral eventrations, bilateral eventrations are almost always associated with significant respiratory compromise in the neonatal period. Respiratory distress with severe retractions and cyanosis are the major presentations. The pathophysiology is similar to congenital diaphragmatic hernia (CDH). In fact both conditions mimic each other clinically. The differentiating features are radiological: (i) the diaphragm is complete (though thin) in congenital eventrations; and (ii) it may be displaced to the normal position on institution of positive pressure ventilation, as in our case. The diagnosis is much easier with ultrasound

which would demonstrate the paradoxical movement of the diaphragm also(3).

The precise etiology of congenital eventration is not known. Bilateral congenital eventration has been associated with chromosomal anomalies, especially trisomy 18(4). It has been reported in siblings(5) and in monozygotic twins(6), suggesting the possibility of a genetic predisposition. Intrauterine exposure to cytostatic drugs(6) and congenital viral infections(7) are the other possible etiological agents.

Prompt diaphragm and mechanical ventilation are initially necessary to improve the respiratory distress. Early simultaneous bilateral repair of the diaphragm is the only definitive treatment for this condition. All 3 infants who underwent this modality of treat-

ment survived, while only two infants without such therapy have survived so far(3). Prolonged mechanical ventilation in the hope of spontaneous recovery itself may be harmful causing airway and lung complications(8), as in the index case. Hence, early surgical intervention is recommended in all symptomatic cases.

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Ultrasound Guided Percutaneous Drainage of Pancreatic Pseudocysts

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Pancreatic pseudocysts are localized collection of pancreatic secretions in a cystic structure that lacks an epithelial lining, and accumulates in necrotic portion of pancreas or in the lesser sac. Pseudocysts of

pancreas are uncommon lesions in infancy and childhood(1,2). Spontaneous resolution of pseudocysts occurs in 20-25% cases(3), the rest however, require intervention. Surgery used to be the only option available for many years, but with advances in imaging modalities it has been possible to carry out simple interventional procedures like percutaneous drainage, which are very effective, have a low complication rate, decrease

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