

Left Bochdalek Diaphragmatic Hernia in Newborn at Hospital Gabriela Alvarado, Honduras, 2022

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Abstract

Bochdalek's hernia is the most common type of congenital diaphragmatic hernia and constitutes 85% of cases. Bochdalek hernia (BH) is extremely rare. A case of Bochdalek hernia in an adult patient is presented and we discuss the literature.

Keywords: Bochdalek Hernia (BH); Congenital Diaphragmatic Hernia; Newborn

Introduction

Bochdalek diaphragmatic hernia is a disorder characterized by a defect in the posterolateral closure of the diaphragm that occurs during the development of the embryo. Thus, the direct cause of the protrusion of abdominal structures into the chest cavity through the diaphragm. This type of hernia is considered one of the most frequent hernias of congenital origin. To be precise, this type of ductal closure alteration occurs between 8 and 10 weeks of life and is more frequent in the left diaphragm [1,2].

Regarding the epidemiological statistical aspects, the prevalence can be found between 1/2000 to 1/12500 births and there is no significant difference between sexes, it is also known that they can remain undetected during childhood in 5 - 10% of cases. Its appearance is also considered a reason for neonatal urgency, since it is accompanied by severe respiratory distress, secondary to pulmonary hypoplasia that directly threatens the life of the child [3].

The diagnosis can be obtained through imaging studies, such as X-rays or through computed tomography. The guidelines indicate that surgical repair is the recommended therapy for all patients with left Bochdalek diaphragmatic hernia, whether in the presence of symptoms or asymptomatic [4].

Presentation of the Case

Female newborn, with maternal history: 34-year-old mother, housewife, from Patuca Olancho, with five prenatal check-ups in a health center without ultrasound control in any of them. With personal pathological history of obesity, at the time of admission she referred spontaneous rupture of membranes. With gynecological-obstetric history: gestations: six, deliveries: five. No unknown father data.

A single product is obtained via the vaginal route, cephalad, female, size: 53.5 cm, Pc: 35 cm, weight: 3700g. Clear amniotic fluid, not fetid, not hot, without cord circulars, with early cord clamping, with APGAR of 1 at the first minute, is received flaccid, cyanotic and without respiratory effort, who undergoes advanced neonatal resuscitation maneuvers for 20 minutes, patient, as ventilation was given, presented generalized cyanosis with abdominal distension, persisting cyanotic.

The airway was protected with an endotracheal tube number 3.5 fr fixed 9.5 cm without improvement despite ventilation, the patient presented cardiorespiratory arrest, cardiac massage was performed, 4 doses of adrenaline were administered, the patient at no time recovered or respiratory effort, neither coloration nor frequency, declaring himself dead after 20 minutes. Postmortem x-rays were performed, finding displacement of the abdominal contents towards the thorax through a diaphragm defect, revealing a diaphragmatic hernia.



Figure: Postmortem X-rays.

Discussion

Bochdalek's hernia (BH) is a congenital diaphragmatic hernia caused by failure of adequate fusion of the posterolateral diaphragmatic foramina; results in displacement of the abdominal components into the thoracic cavity. This mainly occurs during the ninth or tenth week of fetal life. Bochdalek first described this anomaly in 1848. The incidence is reported to be 1 in 2,200 - 12,500 live births, and Bochdalek hernia (BH) usually occurs (80% - 90%) on the left side [5]. Bochdalek hernia in adults is extremely rare; with less than 100 cases published in the literature. The largest defects in BH are associated with pulmonary hypoplasia on the affected side and respiratory distress syndrome after birth [6].

Minor defects are not associated with a deficit in lung development and may be asymptomatic until herniation of abdominal contents into the thoracic cavity with respiratory consequences. The colon is the most common intra-abdominal organ to migrate through the diaphragmatic defect and can cause large bowel obstruction. Surgical repair has traditionally been performed by laparotomy, however, since laparoscopy was used, laparoscopic treatment began to be used more frequently due to the shorter hospital stay and early start of labor [7].

Conclusion

Although Bochdalek diaphragmatic hernias occur more frequently in the first months of life, this hernia can only be identified through postmortem processes, so it is necessary to generate detailed analyzes in the natality prior to birth in order to detect this type. diseases and promote prevention or intervention practices.

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