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Congenital Diaphragmatic Hernia Becoming Symptomatic During The Last Trimester of Pregnancy

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We herein report a case of gastric perforation caused by an incarcerated left sided Bochdalek hernia in a 36 week pregnant woman. She was admitted to our clinic with a non localised abdominal pain lasting few hours. Her general condition got worse short time after admittance. She underwent cesarean and laparotomy revealed, gastric perforation and a left sided Bochdalek hernia which was repaired. Postoperative period was uneventful.

***Key Words*:** Congenital diaphragmatic hernia, gastric perforation, pregnancy.

Gebeliğin Son Trimesterinde Semptomatik Hale Gelen Konjenital Diyafragmatik Herni

36 haftalık gebeliği bulunan bir olguda, inkarsere sol Bochdalek hernisi nedeniyle gelişen mide perforasyonu olgusunu sunuyoruz. Olgu, kliniğimize son birkaç saatte başlayan lokalize edilemeyen karın ağrısı şikayetiyle yatırıldı. Kliniğe kabulden kısa süre sonra genel durumu kötüleşti. Acil sezaryen operasyonuna alınan olguda yapılan eksplarasyonda gastrik perforasyon oluştuğu ve sol Bochdalek hernisi varlığı izlendi. Sezaryen sonrası, Gastrik perforasyon yeri ve Bochdalek hernisi onarıldı. Postoperatif dönemde hasta komplikasyonsuz şekilde iyileşti.

Anahtar Kelimeler: *Konjenital diafragma hernisi, mide perforasyonu, gebelik.*

Introduction

Diaphragmatic herniae becoming symptomatic during pregnancy are uncommon and are usually associated with a history of traumatic injury and they are rarely congenital. Congenital diaphragmatic herniae usually manifest in neonate due to hypoplastic lungs caused by the mass effect of the abdominal contents or in the childhood (1). Diaphragmatic hernia may be complicated with acute or chronic gastric volvulus.

Case Report

A 29 year old primigravid woman with, 36 weeks pregnancy admitted to our clinic with nonspesific abdominal pain lasting few hours. Her vital signs were stable and gynecologic examination was normal at admittance. By obstetric ultrasonography, a single fetus with normal amniotic fluid and placenta were seen. She had no trauma or disease history and no abnormality was diagnosed during prenatal visits. In less than half an hour after admittance, she developed a violent epigastric pain and tenderness with dyspnea. Her lips suddenly become cyanotic, respiratory rate and pulse increased, blood pressure decreased. The cardiotocograph indicated as fetal distress. An emergency laparotomy was performed and gastric contents were seen freely floating in the abdomen. Following caesarean section performed due to fetal distress and delivery of a healty 2600 gr., 47 cm, female baby, gastrointestinal system was explorated by general surgeons.

Gastric perforation and a left sided Bochdalek hernia were noted. Stomach and diaphragmatic hernia were repaired and a thoracic tube was placed to the left thoracic cavity. Patient and newborn did well in the post operative period, no complication occured and patient was discharged from the hospital.

Discussion

Diaphragmatic herniae becoming symptomatic during pregnancy are uncommon and mostly associated with traumatic injury because congenital diaphragmatic herniae are often diagnosed in childhood (1). Acquired traumatic herniae are more common in adults and may be due to blunt or sharp injuries of the thoracoabdominal region. Symptoms due to herniation may be apparent immediately or apperance of symptoms may last as much as 40 years (2). Congenital diaphragmatic herniae are of two types; Bochdalek herniae develop due to failure of the pleuroperitoneal membrane to close the

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pleuroperitoneal canal and Morgagni herniae result from a failure of the muscular portion to close normally. In %85 of adults, Bochdalek hernia occurs on the left side like infants, because of the closing effect of the liver on the right side. In approximately % 25 of the cases, it is associated with congenital malformations of especially the cardiovascular or nervous system (1, 3, 4). Since Bochdalek hernia allows the abdominal contents to enter into the thorax, it may be associated with hypoplastic lungs and often cause severe problems in the neonate. Since 1848, when Bochdalek, a professor of anatomy,first described this hernia, fewer than 100 adults cases are reported in the literature (5). Morgagni herniae are usually smaller and generally not become symptomatic. They are usually being diagnosed incidentally on chest X rays. In pregnancy, many factors predispose to diapragmatic herniae. These are displacement of abdominal contents by the gravid uterus, relaxation of smooth muscle and softening of ligaments due to hormones. All these cause herniation of abdominal contents into the thorax when combined with negative pleural pressure. Straining due to hyperemesis may also increase transdiapragmatic pressure and cause herniation. Labor increases intraabdominal pressure so much that it can cause herniation (1).

Due to displacement of mediastinal structures by the herniated abdominal structures, venous return from the body may be impaired and hypotention may occur(6). Compression of lung may cause shortness of breath and hypoxia (7). Compression of segments of GIS may cause obstruction, strangulation, necrosis of the strangulated segment (8).

No concensus is present about the timing of repair of hernia during pregnancy. Some authors suggest that surgery must be delayed until the second trimester before the uterus mass risks further herniation and organogenesis is complete. Others suggest immediately repair of the defect regardless of the gestational week(9, 10). If diagnosed in the last trimester, the defect may be repaired at a caesarean section before the onset of labour. Labour is discouraged to avoid herniation.

Diapragmatic hernia may be complicated by gastric volvulus (11). Gastric volvulus may be acute or chronic. Chronic gastric volvulus presents with nonspesific abdominal symptoms. Perforation, peritonitis, shock and death are complications of acute gastric volvulus so it is a surgical emergency. Our patient did not have a trauma history to cause defect in the diaphragm and so herniation. During surgery a left sided Bochdalek hernia was diagnosed. She did not have chronic nonspesific abdominal symptoms so she had acute gastric volvulus, perforation and peritonitis.

Gastric volvulus is a rare condition which can cause death due to perforation so its diagnosis requires a high index of suspicion. Imaging studies are used for diagnosis of gastric volvulus.

Kaynaklar

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