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Symptomless Massive Herniation: Giant Adult Bochdalek Hernia+

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Adult type diaphragm hernias are seen usually in penetrating injuries. But herniation may be possible through the congenital diaphragmatic defects in the adults which rarely occur.
A 34-year-old male patient was admitted to the hospital because of the pathologic appearance in his control chest radiography. In his physical examination there was no abnormal finding except decreased breath sounds in the lower part of left hemithorax. It was detected that two-thirds of the left hemithorax was filled with the intestine except stomach and left colon in chest x-ray, CT and graphies with barium. There was no mediastinal shift. Abdominal solid viscera were not herniated. Posterolateral thoracotomy was performed. It was detected that there was a 8 cm-diaphragmatic defect in the posterolateral portion of the diaphragm and intestinal viscera was herniated through the defect to the thorax. There was no peritoneal sac. We could hardly manage the reduction of viscera to the abdomen only after median laparatomy was performed. No complication was determined.
Although, thoracotomy is the initial approach for the chronic diaphragmatic hernia, laparotomy should be added to the procedure because of the difficulties in reduction of massive viscera herniation to the small abdomen and presence of malrotation.

Key Words: Hernia, Surgical treatment, Diaphragm, Congenital, Bochdalek

Semptom Vermeyen Masif Herniasyon: Dev Erişkin Tipi Bochdalek Hernisi

Erişkin tipi diyafram hernileri sıklıkla travmatik olup delici kesici alet yaralanmalarından sonra görülmektedir. Ancak çok nadir de olsa diyafragmatik konjenital defektlerden ileri yaşlarda herniasyon olabilir.
34 yaşında erkek hasta kontrol akciğer grafisinde patoloji saptanması üzerine hastanemize başvurdu. Hastanın fizik muayenesinde sol alt zonda solunum seslerinde azalma dışında pozitif bulgu tespit edilmedi. Hastanın akciğer grafisi, toraks tomografisi ve baryumlu tetkikleri sonucunda sol hemitoraksın 2/3 alt kısmını mide ve sol kolon haricinde tüm intestinal sistemin doldurduğu görüldü. Mediastinal shift gelişmemişti. Batın solid organları herniye olmamıştı. Sol posterolateral torakotomi yapıldı. Diyafragmanın posterolateralinde 8 cm uzunluğunda defekt ve buradan visserlerin herniye olduğu görüldü. Peritoneal herni kesesi yoktu. Visserler batına ancak median laparotomi yapılarak redükte edilebildi. Postoperatif dönemde komplikasyon gelişmedi.
Kronik tip diyafragma hernilerinde ilk yaklaşım torakotomi olmasına karşın, masif organ herniasyonunda; organ redüksiyonunda batının küçük olması nedeni ile yaşanan zorluk ve malrotasyon varlığı operasyona laparotomi eklenmesini gerektirir.

Anahtar Kelimeler: Herni, Cerrahi tedavi, Diyafram, Konjenital, Bochdalek

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Bochdalek Hernia (BH) occurs as a result of herniation of the abdominal organs through a congenital defect of the posterior diaphragm near crura. It is seen rarely in adults with the incidence of 0.17% .[1] We present a late BH with surgical results.

CASE

Thirty-four years old male patient was admitted to the hospital with the complaints of upper respiratory tract infection. There was no history of any disease in his past medical history. In physical examination, absence of breath sounds in the left lower hemithorax and intestinal sounds in the same location were detected. In his chest x-ray, left diaphragm contour was disappeared and the half of the left hemithorax was filled by nonhomogenous mass without well defined margins (figure 1a,b). Thorax tomography and MRI examinations revealed diaphragmatic herniation of the intestinal organs to the left hemithorax (figure 1c,d). By floroscopy, diaphragm contour integrity was not able to be displayed. Esophagus, stomach, intestinal system graphies with barium were performed. It was observed that all intestinal system except stomach and left colon were placed in the left hemithorax (figure 1e). Abdominal solid organs were not herniated.

Thoracotomy was performed (figure 2a). Neither adhesion nor hernia pouch was found. The defect of the diaphragm was seen at the posterolateral part of the diaphragm and it was 8 cm in diameter (figure 2b). Appendix were also seen in thorax (figure 2a). Hence it could not be possible to push back the herniated organs to the abdomen; laparatomy was needed to prevent trauma to the intestine and malrotation of mesentery. Herniated abdominal organs were taken out from the laparatomy incision via bimanually manipulations. The defect of the diaphragm was closed primarily using 0 no silk sutures without a necessary of any graft material. Thoracotomy and laparatomy incisions were closed after placing the organs in the abdomen and placing drainage tubes into the abdomen and thorax. He was discharged from the hospital on the seventh day. He is now in his 9th postoperative month and no complication has been observed in his follow up.

Figure 1. a,b: PA and lateral chest graphies of the patient showing heterogeneous mass without defined margins. **c,d:** MR examination demonstrating abdominal contents in the left hemithorax. **e:** Intestinal system graphies displayed almost all intestinal system in the left hemithorax except stomach and left colon.

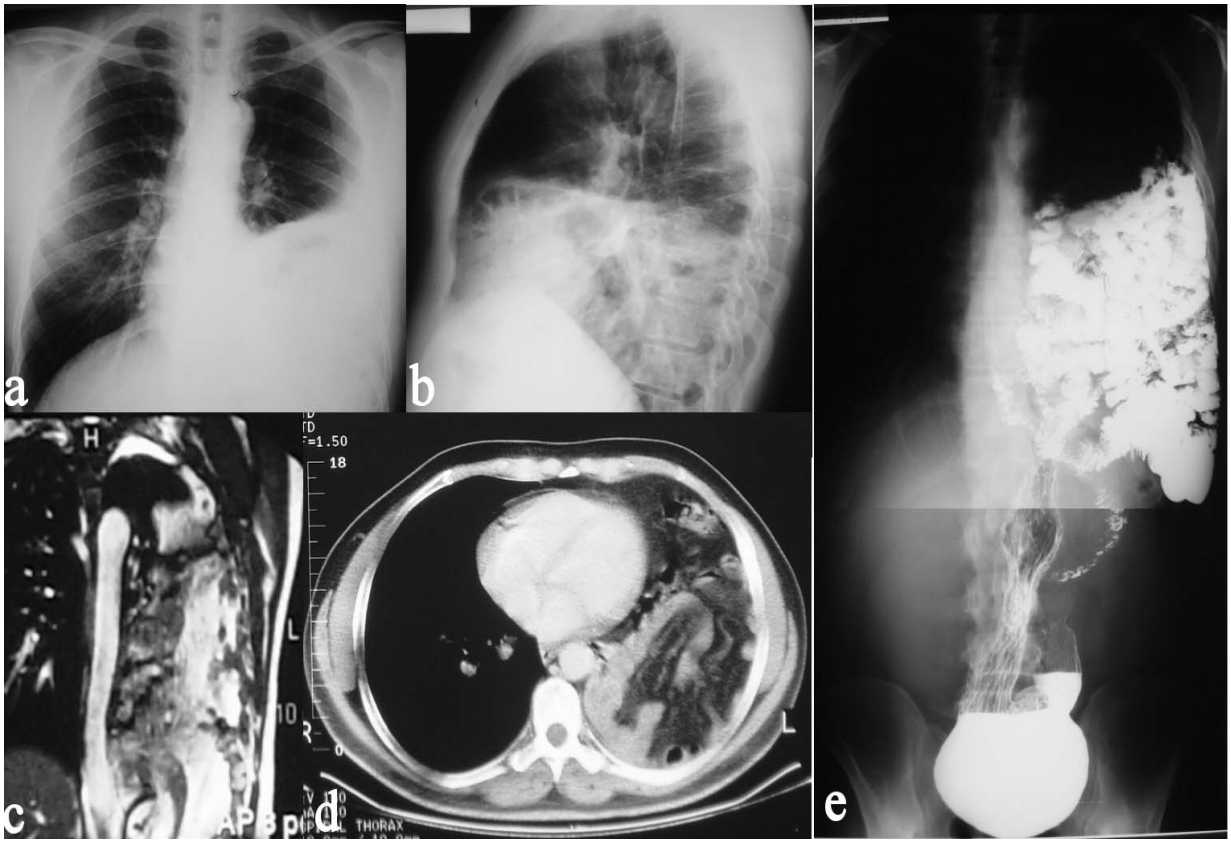
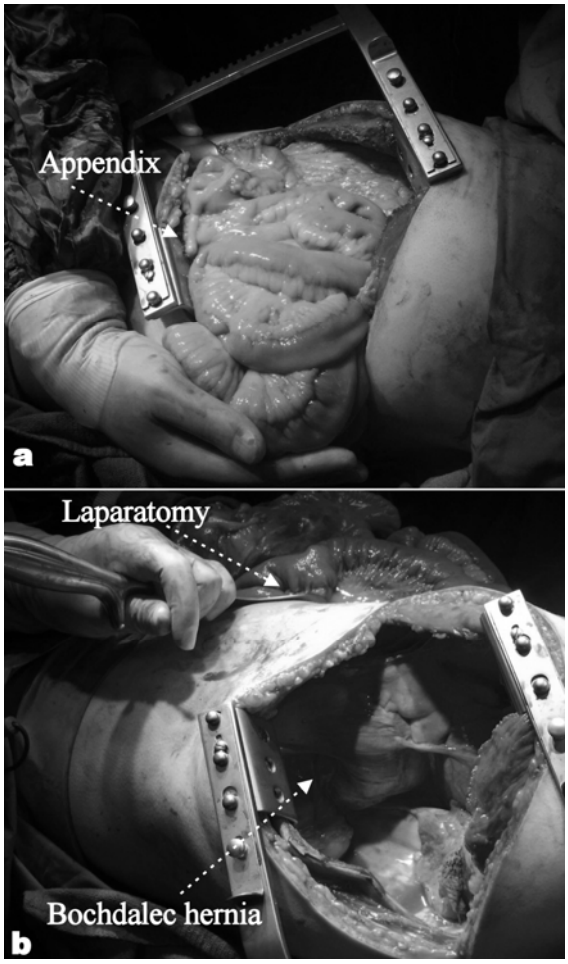


Figure 2. a: Thoracotomy incision, appendix was also in left hemithorax, **b:** after performing laparatomy incision and pulling back the abdominal organs in abdomen hernia defect was able to be closed.



DISCUSSION

In the adult type Bochdalek hernias, abdominal symptoms are seen more frequently than the pulmonary symptoms (chest and shoulder pain, coughing or dypnea).[1,2] The most frequently seen abdominal symptoms are intermitant abdominal pain, nausea, vomiting and dysphagia. Acute abdomen develops in the existence of the strangulation, obstruction or perforation. It can be seen bilaterally.[3] Because of the large defect of diaphragm complications did not exist and symptomless abundant herniation was observed.

Diaphragmatic hernia can be suspected in chest radiographies. For definite diagnosis, contrast radiographies are needed. Thorax tomography is usefull for solid organ herniation and makes the diagnosis definite. In MRI, structure of the diaphragma can be well determined.

Surgical repair is the most logical management performed via laparotomy, laparoscopy, thoracotomy, thoracoscopy or the combinations of them. If herniated organs are small in amount and the defect is small either, laparoscopy should be chosen. Thoracoscopic management can be performed in the management as previous abdominal intervention. Laparotomy is usefull for determination malrotaion and its treatment.[4,5] In the chronic cases with adhesions to the adjacent structures Thoracotomy is the most appopriate management. Laparotomy should be added if reduction could not be managed or avoiding trauma and malrotation.

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