

Nonspecific Infectious Bilateral Chylothorax and Chyloabdomen with Symptoms of Acute Abdomen

Akut Batın Semptomlu Nonspesifik-İnfeksiyöz Bilateral Şilotoraks ve Şiloabdomen Olgusu

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Abstract

Co-existence of chylothorax and chyloabdomen is a rare clinical entity. Apart from surgery and extra-surgical trauma, malignancies, liver cirrhosis, nephrotic syndrome, thrombosis in the superior vena cava and acute pancreatitis play roles in the etiology. The case presented in this article was a 35-year-old woman, and the chronic infectious pathology in the cytology, plus the other supportive nonspecific infection parameters prompted us in establishing this diagnosis. Obstruction in the abdominal lymphatics leads to chylous ascites and chylothorax develops in due course. Similar to our case, the clinical entities of chylothorax and chyloabdomen of nonspecific infectious origin may co-exist in the same patient.

Key Words: Chylothorax, Chyloabdomen, Management

Özet

Şilotoraks ve şiloabdomen birlikteliği, nadir bir klinik antitedir. Cerrahi ve cerrahi dışı travmadan başka, malignansiler, karaciğer sirozu, nefrotik sendrom, vena cava superior trombozu ve akut pankreatit gibi nedenler etyolojide rol oynar. Sunulan olgu, 35 yaşında, bayan hasta. Etolojide tesbit edilen infeksiyöz patolojiyi sitoloji ve diğer destekleyici parametreler belirledi. Abdominal lenfatiklerin tıkanması, şilöz asit ve şilotoraks oluşumuna yol açmaktadır. Olgumuzda olduğu gibi, şilotoraks ve şiloabdomenin birlikte görülmesi, nonspesifik-infeksiyöz nedenli olarak da görülebilmektedir.

Anahtar Kelimeler: Şiloabdomen, Şilotoraks, Yaklaşım

Introduction

Chylothorax is a rare clinicopathological condition in thoracic surgery. It is characterized by the presence of fluid and chylomicrons rich in triglycerides in the pleural cavity. Tumors, trauma, idiopathic factors and other causes may be stated in the etiology [1]. It is primarily observed following thoracic and heart surgery with a rate of 0.5%-2.5% [2]. Apart from trauma, another leading cause of chylothorax is malignancy. Chylothorax related to extra-malignant conditions constitutes a very small percentage and in 15% of the cases, the actual cause cannot be clarified [3, 4].

Following confirmation of the diagnosis through biochemical examinations, treatment should be initiated promptly. Oral nutrition must be replaced with parenteral nutrition and the chylous fluid must be drained. In cases

where drainage is persistent despite 2-4 weeks of treatment, the ductus thoracicus may be ligated surgically. Additional surgical and medical approaches may also be utilized.

Our patient was examined in detail and diagnosed as a case of nonspecific-infectious chylothorax, based on our findings.

Case Report

A thirty-five-year-old woman presented to the general surgery department with the complaint of severe abdominal pain and she was hospitalized for evaluation and treatment with the diagnosis of acute abdomen. Abdominal ultrasonography and computerized tomography of the thorax and the abdomen that were performed prior to laparotomy revealed the presence of free fluid in the abdomen and bilateral pleu-

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to any cause leads to chylous ascites and this condition causes chylothorax [6]. The most common causes of chylothorax are surgery and extra-surgical trauma [2]. Apart from trauma and malignancies (especially lymphoma), chylothorax and chyloabdomen may develop in filariasis, lymphangioleiomyomatosis, amyloidosis, cirrhosis, thrombosis in the jugulo-subclavian region, pericarditis, nephrotic syndrome, sarcoidosis, tuberculosis and in the post-radiotherapy stage in malignancies [5].

In a series of 203 patients reported by Doerr et al., surgery or trauma was present in 101 patients, lymphoma and lymphatic disorders were detected in 89 patients, and idiopathic chylopathology was determined in 13 patients [7].

In the diagnosis of chylothorax and chyloabdomen, macroscopic appearance of chylous fluid is important. Diagnosis is confirmed based on biochemical examination of the fluid with triglycerides of >110 mg/dl and a ratio of cholesterol/triglycerides of <1 , and detection of fat globules with Sudan III staining in the microscopic examination. The triglyceride value in our patient was 1354.11 mg/dl, the cholesterol value was 270.8 mg/dl, and the ratio of cholesterol/triglycerides was much lower than 1. Furthermore, lymphocyte domination was prominent (80% lymphocyte domination, 4050 cells/ μ L). In our case, the diagnosis of chylothorax was confirmed based on the 2 parameters stated above, in addition to the macroscopic appearance.

In the diagnosis of chylothorax, assessment of abdominal and thoracic tomographies and evaluation of the fluid are critical in terms of eliminating a possible malignancy. Furthermore, lymphangiography may also play an important role in locating the obstructed region. In the lymphangiography of our patient, multiple abnormalities and lymphangiectasia were observed in the lymphatic system, but the leakage could not be located. Possible causes were eliminated based on the tomography and other examinations and consultations. According to the supportive results of cytology and laboratory analyses and the quick recovery of the clinical state, the patient was regarded as a case of nonspecific infectious chylopathology. The patient promptly responded to treatment and oral nutrition was re-initiated on day 8 of tube thoracostomy.

In cases of chylothorax and chyloabdomen, various disorders such as nutritional deficiency, disorders of immunological function and dehydration develop due to leakage of calories, fluids and proteins. Cardiopulmonary functions are disturbed due to chylothorax.

There is no consensus on the treatment of chylothorax and chyloabdomen. However, daily loss of chylous fluid and

the resulting metabolic disorder, age and etiology play critical roles in the treatment. The surgical treatment approach should be considered in cases where conservative treatment is unsatisfactory. In our case, central venous catheterization was performed following establishment of the diagnosis and oral nutrition was discontinued, followed by hyperalimentation. Biochemical values were monitored daily. Chylous drainage was also monitored. Chylous drainage significantly diminished in a few days and then fully stopped.

In chylothorax and chyloabdomen, lymphatic ducts generally close spontaneously with conservative treatment. In cases where drainage is persistent and increased, surgical intervention should not be disregarded. The main principle in the surgical treatment is repairing the chylous leakage. Ligation of the ductus and primary repair comprises the main surgical method. The surgical methods include direct ligation of the ductus, suturing with the peripheral soft tissues, pleuro-peritoneal shunt procedures, pleurectomy and chemical pleurodesis [8]. The success rate of surgical intervention (thoracotomy and thoracoscopy) is higher than 90%. In recent years, fluoroscopic embolization has also performed on the ductus thoracicus with platinum coils [9].

In conclusion, co-existence of bilateral chylothorax and chyloabdomen is occasionally seen, although it is a rare condition. Especially in cases where trauma, surgery and malignancy are eliminated, an infectious etiology should be considered. In cases with no response to treatment in two weeks, surgical treatment should not be disregarded due to increase in the risk of complications.

Conflict of interest statement: The authors declare that they have no conflict of interest to the publication of this article.

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