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Splenic trauma in a patient with portal hypertension and splenomegaly: A case report

Portal hipertansiyon ve splenomegali olan bir hastada dalak travması: Olgu sunumu

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Abstract

The spleen is the most commonly injured organ in cases of blunt abdominal trauma. Currently, 50-80% of adults with blunt splenic injuries are treated non-operatively. In this report, we present a blunt abdominal trauma patient having a history of portal hypertension and splenomegaly. In grade 3 and even grade 4 splenic injuries non-operative treatment is recommended in current literature. Management of splenic trauma with a patient with history of splenomegaly and portal hypertension is insufficiently discussed in literature. In presented case, hypersplenism and portal hypertension were burden on hemostasis. Even with massive resuscitation, thrombocyte level decreased to 40.000/mm³ after five hours. But, insistence on non-operative treatment in this situation could be fatal.

Keywords: Splenic trauma, Splenomegaly

Öz

Dalak, künt abdominal travma vakalarının en sık yaralanan organıdır. Son zamanlarda künt dalak yaralanmaları olan yetişkinlerin %50-80'i ameliyatsız olarak tedavi edilmektedir. Bu raporda, portal hipertansiyon ve splenomegali öyküsü olan künt bir abdominal travma hastası sunuyoruz. Grade 3 ve hatta grade 4 dalak yaralanmalarında, mevcut literatürde non-operatif tedavi tavsiye edilmektedir. Splenomegali ve portal hipertansiyon öyküsüne sahip bir hasta ile dalak travması yönetimi literatürde yeterince tartışılmamaktadır. Sunulan olguda, hipersplenizm ve portal hipertansiyon hemostaz üzerindeki etkileri görülmektedir. Masif resusitasyon ile bile, beş saat sonra trombosit seviyesi 40.000/mm³'e azalmıştır. Ancak, bu durumda non-operatif tedavide ısrar etmek ölümcül olabilir.

Anahtar kelimeler: Dalak travması, Splenomegali

Introduction

Non-operative management has become very popular management recently in hemodynamically stable patients with blunt splenic injury with overall success rate ranging from 61% to 83% [1-3]. However attempting to manage unstable patients non-operatively may result in preventable deaths [4]. Coexistent liver cirrhosis in such patients is complicated by the presence of coagulopathy, portal hypertension and splenomegaly [5]. Consequently, escalation of intraoperative bleeding and grade of splenic trauma in such critical patients is inevitable.

In this report, we aimed to present a blunt abdominal trauma patient with a history of portal hypertension and splenomegaly.

Case Presentation

30 years-old female was admitted to emergency department with a complaint of blunt abdominal trauma. After general examination, blood analysis and radiological examinations were performed. Physical examination was revealed right and left upper abdominal quadrant tenderness. In patient history, portal hypertension, splenomegaly and hypersplenism had been diagnosed three years ago. Blood analysis was showed that hematocrit level 26%, hemoglobin 8.2 g/dl and thrombocyte 52.000/mm³. Abdominal ultrasonography was showed abdominal fluid and computed tomography was showed grade 3 splenic injury (figure 1).

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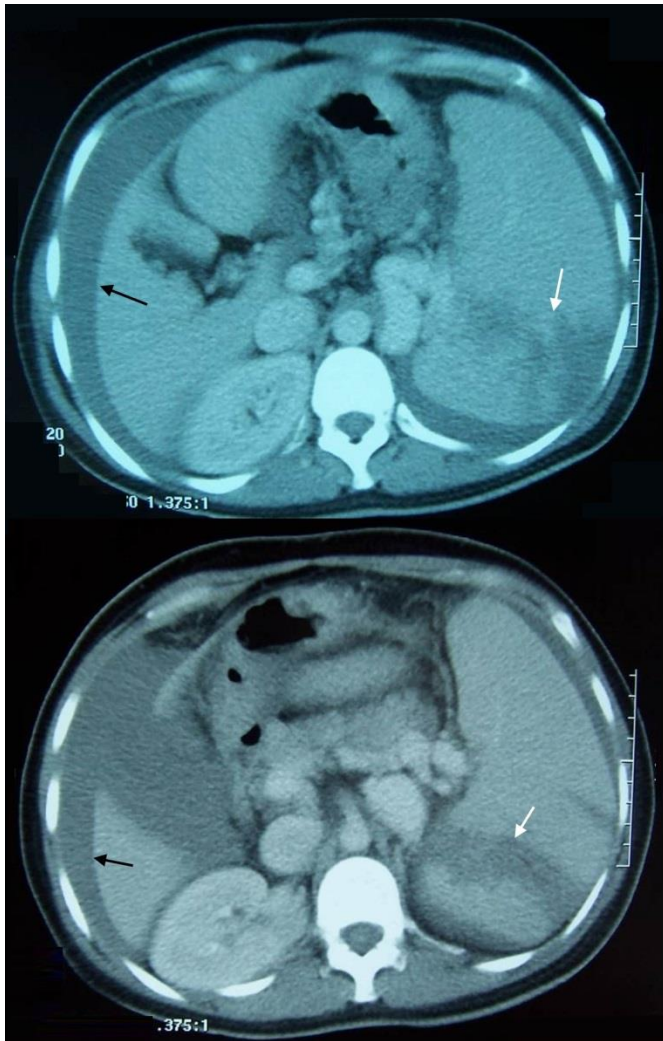


Figure 1: Abdominal computed tomography view of the patient (white arrow: splenic injury, black arrow: intraabdominal fluid).

Patient was transferred to intensive care unit for close monitorization. After five hours of resuscitation even with blood products (four erythrocyte, two fresh frozen plasma and two thrombocyte transfusion), hemostasis could not be achieved. Emergent operation, splenectomy, was performed. Postoperative period was uneventful, and patient was directed to the hepatobiliary and gastroenterology department.

Discussion

Non-operative management of blunt splenic injuries has accepted after 1960s. It was advocated by pediatric surgeons mainly to avoid the fatal complication of post-splenectomy sepsis [6]. In 1980s non-operative management in such trauma had been shown to be safe and effective [7 – 9]

Liver cirrhosis is common in the Western world and it is on the top ten causes of death. Up to 15% of chronic alcoholics develop liver cirrhosis [10]. Hepatitis C infection is another factor in liver cirrhosis particularly in the third world countries, and 15–25% of them progress to severe liver disease, leading to liver cirrhosis in 20% of persistently [11, 12].

Fang et al [13] looked at traumatic splenectomy with coexistent liver cirrhosis, and looked at the efficacy of non-operative management of patients with splenic trauma over 5 years period in Taiwan. They identified 12 patients with coexistent liver cirrhosis and blunt splenic trauma. The amount of blood transfusion within 72h after admission ranged from 4 to

26 units. Patients with coexistent liver cirrhosis and blunt splenic trauma had a significantly higher non-operative management failure rate compared with non-cirrhotic patients of the same cohort (92% vs 19%). Despite aggressive transfusion, all patients soon became hemodynamically unstable and required emergent laparotomy. They advocate along with aggressive transfusion of fresh frozen plasma in patients with severely deranged clotting regardless of hemodynamic status [13, 14].

In our case, the patient have non-cirrhotic portal hypertension and splenomegaly in history. Even her liver was not cirrhotic, coagulation system was not working properly possibly due to low functions and low volume of thrombocytes.

In conclusion, non-operative management of splenic trauma is recommended in up to grade 3, even grade 4 splenic injuries. However attempting to force non-operative management in patient with a history of coagulative problems may result in preventable deaths.

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