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Isolated Gallbladder Haematoma After Abdominal Blunt Trauma Without Surgery

Künt Travmaya Bağlı İzole Safra Kesesi Hematomunda Konservatif Tedavi

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Abstract
Isolated gallbladder injury after trauma occurs rarely and when unrecognized mortality is too high. In some hemodynamically suitable cases, conservative treatment may be the best choise for the patient. We presented a case with conservatively treated abdominal trauma after stucking in the elevator and had isolated gallbladder injury.

Keywords: Abdominal Trauma, Blunt Trauma, Gallbladder Haematoma, Gallbladder Injury

Öz
Travma sonrası izole safra kesesi yaralanması nadir görülmekle birlikte tanı konulmadığında mortalitesi oldukça yüksektir. Hemodinamik olarak uygun vakalarda konservatif tedavi yaklaşımı hasta için en iyi seçenek olabilir. Bu yazımızda asansörde sıkışma sonucunda künt batın travmasına sekonder izole safra kesesi hematomu gelişen hastanın cerrahiye gerek kalmadan konservatif tedavi ile iyileşebileceğini vurguladık.

Anahtar Kelimeler: Batın Travması, Künt Travma, Safra Kesesi Hematomu, Safra Kesesi Yaralanması

Introduction

The gallbladder injuries are most often caused by penetrating mechanisms and it is the uncommon finding of blunt trauma and usually occurs after motor vehicle crashes (1,2) The incidence of isolated damage to the gallbladder is even smaller due to its anatomic position. The diagnosis of isolated gallbladder injury is difficult. Clinical symptoms and signs are usually not helpful in diagnosis. The computed tomography (CT) is the most reliable imaging technique to diagnose gallbladder injury. The treatment management of such traumas usually requires surgery. Our case is an example of conservative treatment without surgery due to the absence of acute abdomen findings.

Case

A 56-year-old male patient was presented to the emergency service with abdominal pain after he was stuck in the elevator. The patient had normal vital signs and Glasgow Coma Score was 15. In the physical examination, ecchymosis was noted across the upper abdomen and he had right upper abdomen tenderness. Murphy's sign was positive. Bowel sounds were not audible. Hemodynamic parameters were as follow: pulse 86 per minute, blood pressure 110/65 mmHg and laboratory finding were as WBC: 2000, haematocrit: 31, Hb: 10 mg/dl, platelet: 384000/mm3, GGT: 16 U/L, ALT: 46 U/l (normal<40), AST: 104 U/L (normal<40), lactate dehydrogenase: 556 U/L, amylase 270 U/L, Bilirubin 0.25 mg/dl.

The chest and abdomen x-rays revealed no abnormalities (Figure 1). Abdomen CT showed an enlarged, hydropic gallbladder measuring 6x4 cm and intraluminal hematoma (Figure 2). Ultrasonography (USG) showed heterogeneously hyperechoic lesions in the gallbladder but the surfaces were smooth. Abdomen CT and USG demonstrated a gallbladder wall without any signs of perforation or laceration (Figure 3). Also, there was no fluid collection and no injuries of the liver, spleen, kidneys or other abdominal structures. These imaging methods suggested isolated intra-gallbladder hemorrhage following blunt trauma.

The patient was referred to the intensive care and 4 hours later in the plain abdomen grapy, we ruled out the porcelain gallbladder. We decided to treat the patient conservatively. During the follow-up, temperatures were normal and vital signs were stable. The patient remained hemodynamically stable. In the physical examinations, the patient had diffuse epigastric tenderness without peritoneal signs. The patient didn't developed signs of jaundice. He was observed with the daily examination, with laboratory tests and USG, without laparotomy. The patient was discharged with full recovery.

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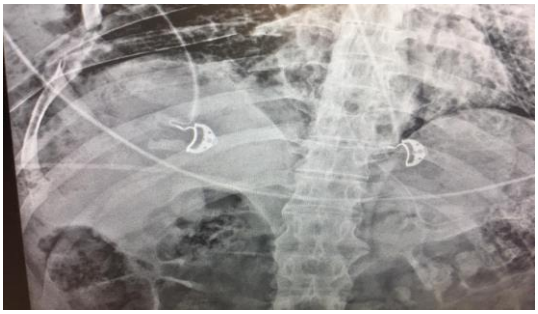

Figure 1. X-ray scan.

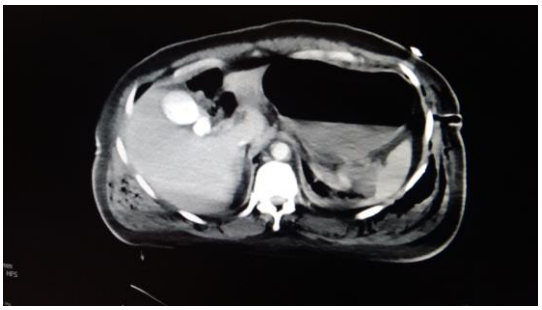

Figure 2. Abdomen CT scan.

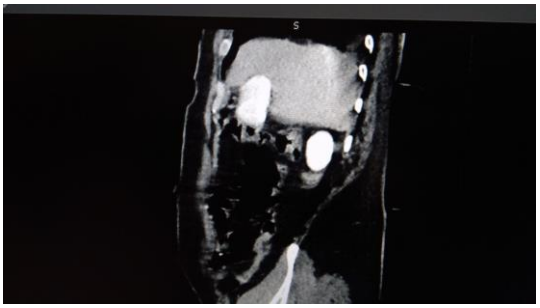

Figure 3. Abdomen CT scan.

Discussion

Isolated traumatic injury of the gallbladder after blunt trauma occurs rarely. In a study which involves 5670 cases of blunt and penetrating trauma reported the incidence of gallbladder trauma (not isolated) to be 1.9% (3)

The gallbladder is anatomically protected by the liver, omentum, and other intestinal organs, shielded by the rib cage.4 The gallbladder damage is usually associated with the additional surrounding visceral injury.5 In a review of 22 patients of gallbladder injury, there was no isolated lesion.6 The liver lacerations are the most commonly seen injuries with gallbladder injuries. Along with the multiorgan injuries, gallbladder injuries have mortality about the %24 rate, also 49% of them were severely injured with unstable hemodynamic status.7 The mortality and morbidity depend on complications of accompanying injuries (8).

The clinical signs and symptoms are not always helpful in diagnosis. There is a wide array of presented physical examinations from signs of an acute abdomen, hypovolaemic shock or mild tenderness. Usually, the patient's clinical symptoms develop slowly (9).

The blunt injury of the gallbladder occurs with several mechanisms, classified such as contusion, laceration, avulsion (10). Laceration defined as traumatic rupture or perforation of the gallbladder may present as bile leakage into the periton (11). The gallbladder contusion is commonly referred to intramural hematoma concluding discrete bruising of the gallbladder wall. The underlying mechanism of injury is contusion injury as a result of blunt trauma as in the current case. The avulsion injuries are the most severe injuries which are identified as partially torned gallbladder from its liver-bed or complete separation from the liver.

CT is the gold standard for the diagnose. In cases of abdominal traumas, recognition of high-density fluid within the gallbladder lumen is associated with fresh blood within the lümen (12,13). Ultrasound and CT are the most reliable imaging techniques to confirm the diagnosis. CT scan is a better option to rule out adjacent organ injuries (14).

Cholecystectomy and percutaneous drainage are the choices of surgical treatment for gallbladder injury. Cholecystectomy is the safest surgical treatment for gallbladder injury. Minor contusions may be treated with close observation and supportive care. The gallbladder traumatic injury with larger rupture and major tearing requires cholecystectomy but conservative treatment is an option for selected patients (15). We followed isolated gallbladder traumatic injury with frequent examination, blood samples and ultrasound without surgery, and this is the pitfall on this case.

In conclusion, surgeons are mostly trained for the solution with surgery and we can make the decision for surgery more easily. In cases which exploratory laparotomy decision is challenging there may be a diagnosing interval for escaping from unnecessary laparotomy of gallbladder injuries. An example of an unusual form of gallbladder injury, conservative treatment results in full recovery in selected cases instead of surgery. There could be checkpoints to decide whether conservative treatment is appropriate instead of surgery when multiorgan injury is ruled out. The management of the gallbladder injury should be varied with the degree of injury. These factors could include such as vitals, hemodynamics, physical examination, CT, mechanism of injury, multiorgan injuries. Despite the limited cases of isolated gallbladder injuries in literature, there is a

shift to nonsurgical management in hemodynamically stable minor contusion groups.

Written Consent: Written consent was taken from patient on 10.07.2019.

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