

***Salmonella typhi* abscess as a late complication of simple cyst of the liver: A case report**

Basit Karaciğer Kisti'ne ait geç bir komplikasyon, *Salmonella typhi* absesi: Olgu sunumu

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Liver abscesses due to Salmonella species occur rarely. In this case report, we present a simple liver cyst as a focus for Salmonella abscess, which to date has never been described in the literature. This case report emphasizes that simple liver cyst could be infected with Salmonella and progress to a complicated liver abscess, which responds well to percutaneous catheter drainage and anti-biotherapy.

Key words: Salmonella, liver abscess

Salmonella'ya bağlı gelişen karaciğer absesi nadir görülen bir durumdur. Bu olgu sunumu ile, daha önce literatürde yayınlanmamış olan ve Salmonella absesi için odak teşkil eden bir basit karaciğer kistini sunmak istiyoruz. Bu olgu sunumu, basit karaciğer kistinin Salmonella ile enfekte olabileceğini ve sonrasında uygulanacak olan perkütan kateter drenajı ile antibiyotik tedavisine iyi yanıt verebilecek komplike bir karaciğer absesine dönüşebileceğini göstermektedir.

Anahtar kelimeler: Salmonella, karaciğer absesi

INTRODUCTION

Liver abscesses due to *Salmonella species* occur rarely and most reports have been from endemic areas (1). There is no previous report in the English literature about hepatic abscess caused by *Salmonella* spp., which superimposed on a simple cyst of the liver.

CASE REPORT

A 30-year-old male admitted to our emergency unit with the complaints of epigastric pain, fever and right shoulder pain. Physical examination revealed diffuse rebound tenderness. Vital signs were normal except for body temperature of 39.8°C. Laboratory analysis revealed an erythrocyte sedimentation rate of 86 mm/h, leukocyte count of 22,500 and normal liver and renal function tests. The chest and plain abdominal X-rays were normal.

The past medical history of the patient included a solitary simple liver cyst (5x2x6 cm), which had been diagnosed incidentally four years ago. For-

mer computerized tomography (CT) and abdominal ultrasonography (USG) showed a sub-capsular localization in the right posterior lobe.

The patient underwent laparotomy with the diagnosis of viscus perforation. Exploration revealed a normal abdomen. Abdominal pain and fever continued after the operation. Postoperative abdominal CT showed the presence of a 10x5 cm abscess cavity at the localization of the above-mentioned simple cyst (Figure 1). Hemagglutination test for hydatidosis was normal.

Ultrasonography-guided percutaneous aspiration confirmed an abscess cavity. The abscess was drained (250 ml purulent material) and a 7F pigtail catheter was placed into the cavity for continuous drainage. Cultures of aspirated material from the cavity grew *Salmonella typhi*. Appropriate antibiotic therapy was commenced. The pigtail catheter was removed after four days of drainage and the patient was discharged on the 7th day.



Figure 1. Abdominal CT showing an abscess cavity (10x5 cm) at the localization of the previous simple liver cyst

DISCUSSION

Salmonellosis continues to be a major public health problem, especially in developing countries. Unusual presentation of salmonellosis as a liver abscess is a rare entity, and there have been few reports in the English literature (2, 3).

Salmonella contains approximately 1,700 serotypes and every serotype has the potential to produce any one of the four major clinical entities as gastroenteritis, enteric fever, bacteremia and the carrier state (4). The ingestion of contaminated water or food, especially poultry products, is thought to be the most important source for adults.

Salmonella typhi infections often occur on the basis of various underlying pathologies such as

hydatid cyst, amebic liver abscess or malignant tumors (1). Abscesses due to *Salmonella* species superimposing preexisting conditions of the liver, including amebic abscesses, echinococcal cysts and intrahepatic hematomas, have been previously reported (5). The most likely mechanism of colonization of the liver is the ascent of the organism to the intrahepatic biliary tract during the episode of gastroenteritis.

Percutaneous drainage or laparotomy is the cornerstone in treatment of *Salmonella* liver abscesses. Early recognition, followed in most cases by adequate percutaneous catheter drainage, has provided a safe and effective means of treatment and has lowered morbidity and mortality significantly (6). During the last decades, CT-guided percutaneous drainage of intra-abdominal, and more specifically, intra-hepatic abscesses, has dramatically lowered mortality and recurrence, to less than 10% from nearly 43% in previously described surgical cases up until 1974 (7, 8).

Very few case reports and low volume series of *Salmonella* liver abscesses have been reported in the literature (2-9). Most of these cases had some form of preexisting insult to the liver, principally parasitic abscesses or cyst hydatidosis (9).

Simple liver cyst as a focus for *Salmonella* abscess has never been described in the literature to date. This case report emphasizes that simple liver cyst could be infected with *Salmonella* and progress to a complicated liver abscess, which should respond well to percutaneous catheter drainage and antibiotherapy.

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