

Case Report

Gallbladder Schistosomiasis

Mohammad A. Bakhotmah, MBBS, FRCS(KI); Ibrahim Al Zahrani, MRCPPath

يعتبر مرض البلهارسيا من الأمراض الطفيلية الشائعة في الكثير من أنحاء العالم بما في ذلك المملكة العربية السعودية ويعتبر الكبد أحد أكثر الأعضاء تأثراً بالمرض، وعلى الرغم من ذلك فإن إصابة المجاري المرارية يعتبر أمراً نادراً جداً ولم يسبق نشر أي حالة في المملكة العربية السعودية عن إصابة الحوصلة المرارية بالبلهارسيا وفي هذا البحث تم مراجعة المقالات العلمية ذات العلاقة منذ عام 1966م حتى نهاية 1993م ووجد أن أعلى نسبة سجلت لإصابة الحوصلة المرارية هي 2.5% من مجموع 1220 حالة نشرح لمرضى البلهارسيا. وقد ذكرت الأمور المتعلقة ببلهارسيا الحوصلة المرارية في المناقشة.

Schistosomiasis (bilharziasis) is a major health problems in many parts of the world, including Saudi Arabia. Although the liver is one of the most commonly affected organs, the biliary system is seldom affected and gallbladder schistosomiasis is extremely rare and has never been reported in Saudi Arabia. A case of gallbladder bilharziasis is presented and the world literature on the subject from 1966 till the end of 1993 is reviewed. The highest reported incidence is 2.5% of 1220 autopsy cases of bilharziasis; different aspects of gallbladder bilharziasis are also discussed. *Saudi Medical Journal* 1995; 16(3): 264-266

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Schistosomiasis (bilharziasis) is a cause of major health problems in many parts of the developing world. The most likely, although not definite, location of the adult worm depends on the species; mixed infection is common. Eggs are deposited in the venues of the corresponding location of the adult worm; however, certain eggs settle in ectopic locations and one of the extremely rare locations is the gallbladder. Using the medline search between 1966 and 1993, we were unable to find any reported case or study concerning gallbladder bilharziasis; to the best of our knowledge, this is the first case of gallbladder bilharziasis with gallstones causing chronic cholecystitis to be reported in Saudi Arabia.

Case Report

A 30-year-old man presented to the general clinic with haematuria and right upper quadrant pain. Urine analysis showed heavy infection with *Schistosoma haematobia* and ultrasonography showed a solitary gallbladder stone. Other investigations were normal. There was no renal stone. Laparoscopic cholecystectomy was performed after treating his schistosomiasis by praziquantel. The postoperative period was uneventful. Histology of the gallbladder showed bilharzial chronic cholecystitis.

Pathological Findings

The gallbladder measured 7 × 3 cm; it contained one small stone. The serosal surface was dull and congested and the wall was thickened. Microscopically (Fig. 1) the mucosa was lined by a columnar epithelium and showing lymphocytic infiltrate of the lamina propria with occasional eosinophils. The muscle coat was hypertrophied, fibrosed and infiltrated by lymphocytic cells. Numerous ova of *Schistosoma haematobia* with terminal spine (inset 1) and *S. mansoni* with lateral spine (inset 2) were present in the gallbladder wall. There was focal granulomatous reaction found elsewhere. The appearances are that of chronic cholecystitis with schistosomal infection.

Discussion

Schistosomal eggs which pass to the lumen of the gut or urinary bladder evoke no host reaction, those eggs which do not move fast or move in the wrong direction (as those found in the liver) are soon surrounded by inflammatory cells and granulomatous and fibrotic reactions ensue.¹ Although the liver is one of the most commonly affected organs—leading to liver fibrosis and portal hypertension, the biliary system is seldom affected by complications of schistosomiasis.

From the Department of Surgery, King Abdulaziz University, Jeddah (BAKHOTMAH), and from the Department of Pathology, King Abdulaziz University, Jeddah (AL ZAHrani)

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Address and correspondence and offprint request to: Dr Mohamad A. Bakhotmah, Consultant Hepatobiliary Surgeon, King Abdulaziz University Hospital, Department of Surgery, PO Box 6615, Jeddah 21452, Saudi Arabia

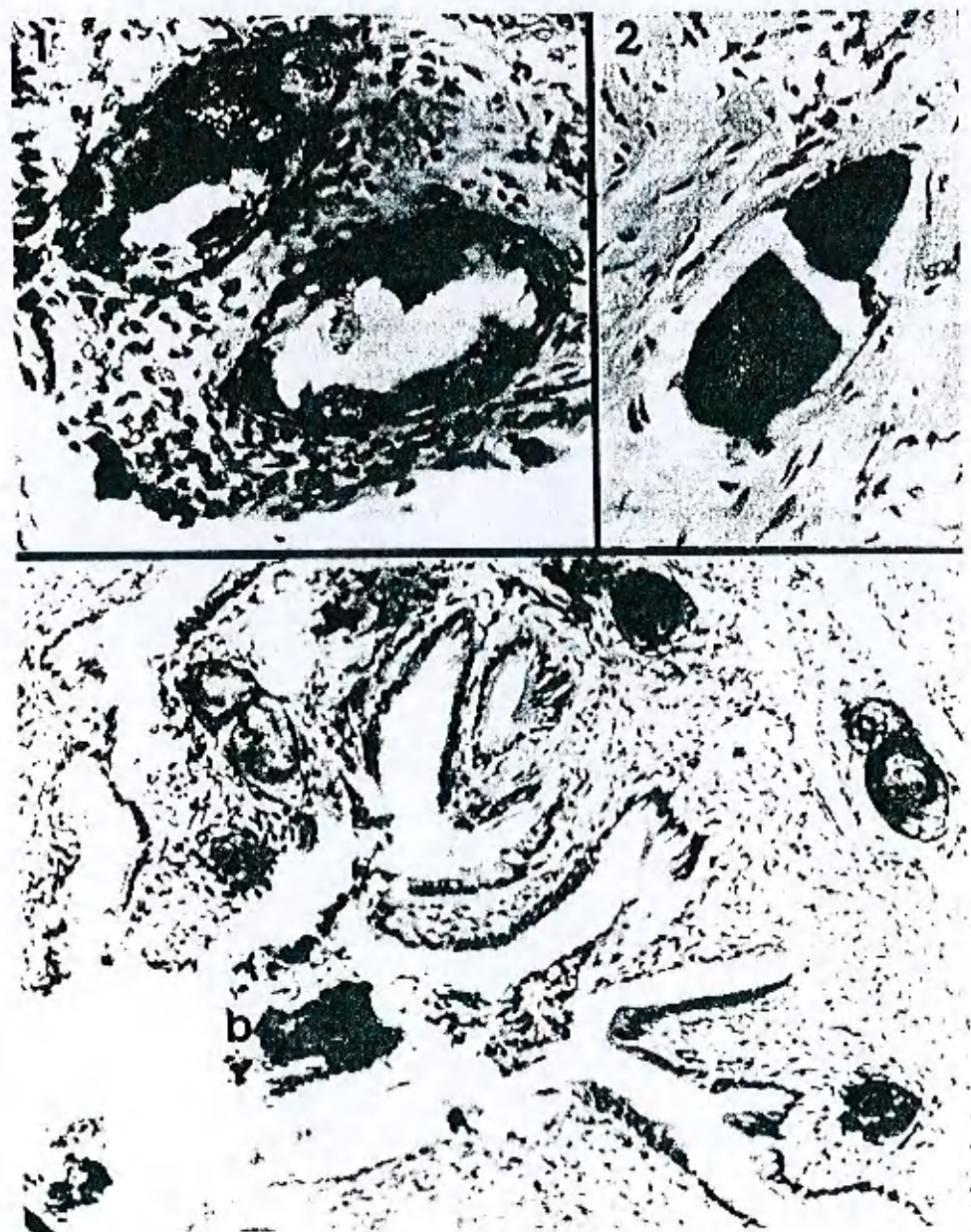


Figure 1. Section of the gallbladder showing lymphocytic infiltrate and schistosoma ova, *S. haematobia* (inset 1) and *S. mansoni*: (inset 2). The lumen contains bile pigment (b).

Ectopic granulomatous lesions have been found in perigenital tissue, spermatic cord, epididymis, testes, uterine cervix, ovary, meninges, spinal cord, brain tissue, stomach, oesophagus and pancreas.¹⁻³ As ascariasis⁵ and cryptosporidiosis,⁶ schistosomal ova has been found in mucosa, submucosa, fibrovascular coat or even free in the gallbladder content;⁷ but still, schistosomal granulomas of the gallbladder causing cholecystitis is very rare.⁴

In an important study of the distribution of the schistosomal lesions in various organs among 1220 autopsies, 2.5% of cases were affected by gallbladder bilharziasis compared with 35% and 5% of the liver and pancreas respectively.⁸

This is probably due to variation of the richness of venous drainage; the more venous the part the greater the chance for the female worms to get in and lay ova.⁸ A mixed infection of the

gallbladder has never been addressed before our case was documented. The thickened wall and impaired gallbladder contraction after fatty meals in patients with bilharzial hepatosplenomegaly⁸ led to the suspicion that they may be more prone to develop gallstones, although this is not yet proved.

Schistosomal ova can form a nidus for the development of renal stones.⁴ Neither we nor others were able to detect any schistosomal ovum in the gallstones retrieved from patients although we did not analyse the stone chemically. Liver biopsy was not done because it was not necessary as liver function tests and laparoscopic appearance of the liver was normal.

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