

Amoebic Renal Cyst: A Case Report

Anuradha Sharma¹, U.K. Chandel², M.L. Gupta¹,
Vijay Sharma¹ and R.K. Sharma²

Department of Microbiology¹, Department of Surgery²,
Indira Gandhi Medical College, Shimla, Himachal
Pradesh, India

***Entamoeba histolytica* can infect any organ of the body, but only one case of renal involvement has been reported till now in the literature. We report a rare case of amoebic renal cyst in a 78-year showing favorable outcome with metronidazole treatment and therapeutic drainage.**

Key Words: Renal, amoebic, cyst.

Amoebiasis is a protozoal infection caused by *Entamoeba histolytica*. It is primarily an intestinal pathogen; the invasive form of the disease is characterized by visceral abscess formations [1]. Common sites of extra-intestinal lesions include the liver, skin, lungs, brain and pericardium [2]. Invasive amoebiasis is a potentially fatal condition. It ranks third on a global scale after malaria and schistosomiasis as a cause of death among people with parasitic infections [3]. Though urogenital amoebiasis has been reported as bilateral amoebic pyelitis in association with cystitis [4], we found only one case of renal amoebiasis with emphysematous pyelonephritis, in a patient who also had diabetes mellitus [1]. We report a case of renal amoebic cyst.

Case Report

A 78-year-old woman reported dragging pain on the left side for two months in surgery in the outpatients department. There was no history suggestive of urinary tract infection or haematuria. The patient did not

complain of fever or night sweats. On examination, there was a palpable lump in the left lumbar region. No other constitutional symptoms or signs were present. The patient was investigated for the possibilities of colon carcinoma (splenic flexure) or renal tumor. Barium enema was normal. Plain X-ray of the abdomen did not contribute any new information. On ultrasonography, a cystic mass was seen at the lower pole of the left kidney. It was 6.1 x 5.5 x 6.7 cm in size, with a volume of 117 cc; there was no evidence of back-pressure changes. Suspecting it to be a hydatid cyst, which is quite prevalent in this region, an indirect haemagglutination (IHA) test was done. It was negative. On CT scan of the abdomen, a cystic mass arising from the mid and lower pole of the left kidney was seen (Figure 1); the possibility of a cystic renal tumor was indicated. Ultrasonographically-guided aspiration of the cyst was done under cover of 80 mg stat intravenous gentamicin. About 110cc thick chocolate-colored fluid was aspirated. It was sent for direct microscopy, cytology and routine bacterial culture and sensitivity. Motile trophozoites of *E. histolytica* with characteristic pseudopodia (Figure 2) and ingested RBCs were seen in saline wet mount. The background was filled with pyknotic bodies. On cytological examination, degenerated neutrophils and macrophages were seen. There was no history of dysentery, and stool examination did not show any cysts/trophozoites of *E. histolytica*. Serum was positive for antibodies by IHA in 1:2048 dilutions for amoebiasis. Bacterial culture of the aspirate indicated *Klebsiella pneumoniae*. This

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Address for correspondence: Dr. Anuradha Sharma, Mohindra Apartments, Nav-Bahar, Shimla-171002. Himachal Pradesh, India. Phone no.:- 0177 2640563/ 9418031700. E-mail: dr_anu03@yahoo.co.in.

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Figure 1. Computer tomography scan of the abdomen showing an amoebic cyst at the lower pole of the left kidney.

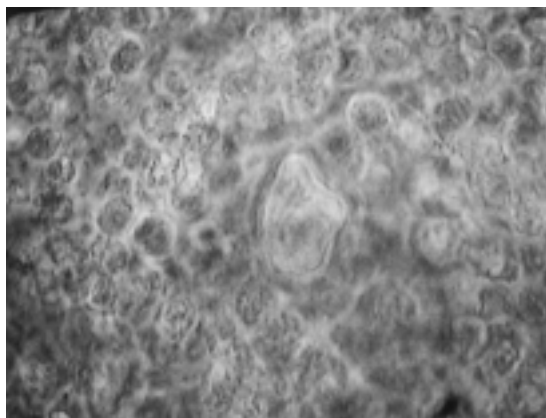
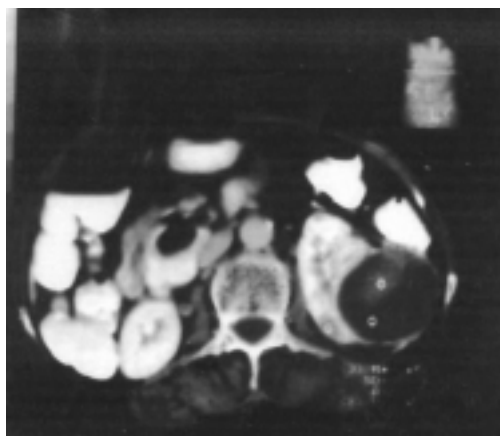


Figure 2. Microscopy showing trophozoite of *Entamoeba histolytica* in renal cyst aspirate.



bacterium was sensitive to gentamicin, ciprofloxacin, cefoperazone, ceftazidime and cefuroxime. Urine was examined for trophozoites of *E. histolytica*; none were seen. All other routine investigations were within normal ranges. The patient was given 400 mg oral metronidazole TDS for three weeks and 500 mg ciprofloxacin BD for five days. The patient was reviewed after three weeks; the cyst persisted, so it was therapeutically drained. It showed no trophozoites and bacterial culture was also sterile. The patient was given 500 mg oral cefuroxime for five days. After two weeks, the patient was free of symptoms and on ultrasonography the cyst had regressed after three months.

Discussion

Worldwide, 50 million people are infected with *E. histolytica*; it causes an invasive disease that may constitute 5 million cases, with mortality in the range of 100,000 per year [5]. *Entamoeba histolytica* can infect almost every organ of the body. By far the most frequent form of extra-intestinal amoebiasis is amoebic liver abscess. The trophozoites reach the liver via the portal circulation. Thoracic complications, i.e. pleuropulmonary, pericardial and mediastinal amoebiasis, are secondary to liver abscess. Involvement

of the central nervous system is rare, and usually single or multiple lesions are seen in cerebral hemispheres. Cutaneous amoebiasis occurs as a complication of intestinal amoebiasis (perianal) or around fistulas of amoebic liver abscesses.

Causes of unilateral solitary renal cysts could be simple cysts of the kidney, hydatid cysts and cystic hypernephroma [6]. In our case, on imaging, the cyst was homogenous and well defined, without any internal echos or debris, which ruled out the latter two possibilities. A simple renal cyst was indicated as a possibility, and the patient was subjected to ultrasonographically-guided aspiration. The pus drained out was thick, non-foul smelling and typical anchovy sauce in appearance. Microscopy showed characteristic trophozoites and cellular material. Bacterial superinfection of extra-intestinal lesions is well known and was present in our case. The IHA test for amoebiasis was positive at a dilution of 1:2048. The Center for Disease Control in Atlanta has chosen the IHA as a standard serological reference test for amoebiasis [3].

The patient responded favorably to metronidazole and therapeutic drainage. Amoebiasis is prevalent in developing countries, and its complications may manifest in myriad ways. They can prove fatal if misdiagnosed; given the availability of very effective antiamoebic drugs, early and correct diagnosis can prevent such outcomes.

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