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Research Paper

Report of a rare case of multiple hydatid cysts and perforation of a large abdominal cyst in a patient

Nursing

KEYWORDS : Hydatid cyst, Abdominal, Perforation

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ABSTRACT

Hydatid cyst is a zoonotic disease that is caused by echinococcus granulosus worm. The patient was a 25-year-old man. In abdominal sonography, perforated cystic lesion of left lobe of liver with cystic lesion (about 17 cm diameter) of abdominal cavity with suspect in mesenteric cyst was reported. The chest radiography and CT scan of the lungs included cystic lesion of the right and left lungs. Regarding the peritonitis symptoms and exacerbated abdominal pain, the patient became candidate for laparotomy that were removed cysts. Second- and third operations of the patients were done with an interval of one month. Hydatid cysts (with about 17 cm and 16 cm diameter) were completely removed. Albendazole treatment continued until 4 months after surgery and on the next visit up to about 7 months later, according to the abdominal and pelvic sonography and chest radiography, fortunately there were no problems and complications.

Introduction:

Hydatid cyst is a zoonotic disease that is caused by echinococcus granulosus worm. Humans accidentally become the intermediate host of this organism. With regard to the development of sheep farming in various countries, spread and development of hydatid cysts are seen all over the world. They can be seen in all parts of the body.1-7 The most common organs that are affected by hydatid disease are liver and lung. In 6 percent of cases, the involvement has been reported outside the liver, lung and spleen that most of them are secondary. Multiplicity of cysts, along with their perforation is among the serious problems that of course have been reported rarely, but in the event of incidence, it can be very dangerous.8 In this report, we have presented a rare case of multiple hydatid cysts and perforation of a large abdominal cyst in a patient.

Case Report:

The patient was a 25-year-old man who was from Shirvan and he had gone to emergency services of hospital with symptoms of severe abdominal pain. The pain of patient was obscurely spread in all parts of the abdomen and this feeling of pain did not had precedence at any particular point in the abdomen and the symptoms were along with early satiety in the last 6 months that was associated with the loss of about 4 kilograms. On initial examination, vital signs were normal and only mild fever (38°C) was observed. In examination, it was found that sclera is mildly an icteric. Auscultation of lungs sounds was normal. In abdominal examination asymmetry of abdominal wall was evident. In palpation of the abdomen, there was abdominal tenderness along with mild rebound tenderness. Other examinations were normal. The only abnormal paraclinical finding was leukocytosis (17000) with a shift to the left. In abdominal sonography, perforated cystic lesion of left lobe of liver with cystic lesion (about 17 cm diameter) of abdominal cavity with suspect in mesenteric cyst was reported. The chest radiography included cystic mass in the right and left lung (Figure 1).CT scan of the lungs included cystic lesion of the right and left lungs (Figure 2). Considering the endemicity of hydatid cyst in the area and CT scan findings, the patient was prepared for operation with diagnosis of hydatid cyst. Regarding the peritonitis symptoms and exacerbated abdominal pain, the patient became candidate for laparotomy. After the second operation the patient had been discharged from the hospital with good status. Albendazole treatment continued until 4 months after surgery and on the next visit up to about 7 months later, according to the abdominal and pelvic sonography and chest radiography, fortunately there were no problems and complications. The abdomen was opened by midline incision and removal of perforated hydatid cyst in the left lobe inside the abdomen and the large and free hydatid cyst inside the abdomen with approximate weight of 1200 grams with resection of liver cyst and abdominal cavity was performed and hepatic cavity was filled with omentum and drain was placed around the liver. Abdominal wall was repaired. After 5 days the patient was discharged from the hospital with good health. Due to rupture of cyst, treatment with albendazole was started for the patient.

Second- and third operations of the patients were done with an interval of one month. Second operation was performed with left posterolateral thoracotomy from sixth intercostals space. Hydatid cyst (with about 17 cm diameter) was completely removed and all pores and bronchioles were closed with thread. Repair of the thoracic was done along with the insertion of chest tube. Third operation like the prior one was performed by right posterolateral thoracotomy to remove the hydatid cyst (with about 16 cm diameter).

Discussion:

Hydatid cyst disease is considered as a major health problem in terms of being costly and causing death in humans and other organisms. 9Cystis diagnosed by using imaging techniques, especially sonography, CT scan and X ray and confirmation of diagnosis is done by finding serum antibodies.10Dissemination percent of hydatid cysts vary in different organs and on the basis of the prevalence rate, in the study that have been conducted in Iran, they are respectively as follows: Liver 57.5 percent, lung 30.3 percent , brain 9.99 percent, spleen 3.7 percent, kidney2.3 percent, pancreas and psoas retroperitoneal, each 1/5 percent and small bowel mesentery and gluteal muscle 0/76 percent each.

According to a study conducted by Polat et al (2003) in Turkey, dissemination percent of hydatid cysts in the liver is only 48/3 percent, in liver and lung 26/9 percent, and in liver, lung and inter peritoneum it has been reported to be 3/8 percent.12

Greatness of hydatid cysts usually causes symptoms to be more prominent in the infected person and according to the location of placement it will cause the emergence of certain symptoms. In this patient, despite the existence of large cysts, there were no bothersome symptoms that make patient to refer to health centers and the patient had gone to hospital after perforation and severe abdominal pain. Despite the low prevalence of hydatid

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cysts in different areas simultaneously, in endemic areas, in the case of observing the symptoms of cysts, different organs must be examined in order to be able to diagnose and treat the cyst in the case of its existence. Detection of this disease is possible with imaging studies 13

Hydatid cysts rupture into the abdominal cavity even in endemic areas is a rare condition 14. The possibility of cyst rupture increases with the increase in its size and the pressure inside it 15, 16.

Pressure inside the cyst can be as much as 50 cm of water and this may lead to spontaneous rupture of the cyst or increase the risk of rupture, as a result of hit. Even mild injuries, such as sports injuries can also lead to rupture of the cyst 14. Abdominal pain, nausea, vomiting and itching are the most common symptoms of a ruptured cyst and usually all acute abdominal symptoms such as guarding, tenderness and rebound tenderness exist. Itching and skin rash are the allergy symptoms and are not very common. Anaphylaxis and sudden death in patients with liver cysts rupture have been reported with the rate of 25 percent14, 16- 18. Secondary hydatid cysts usually occur following the rupture of hydatid cyst of the liver and in this patient the cyst rupture could be an excellent context for subsequent secondary cysts19 that fortunately by constant follow-up of patient up to 7 months later no case of secondary cyst was observed.

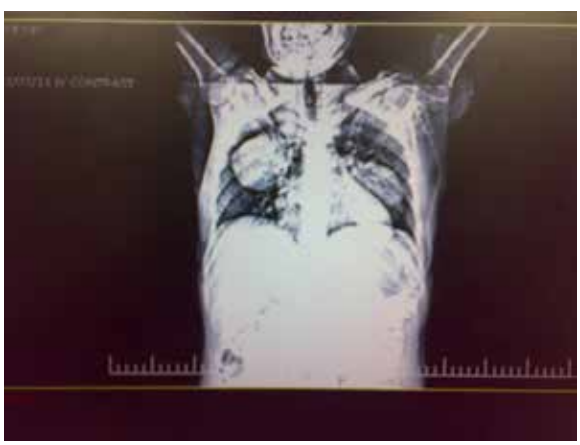

Figure 1

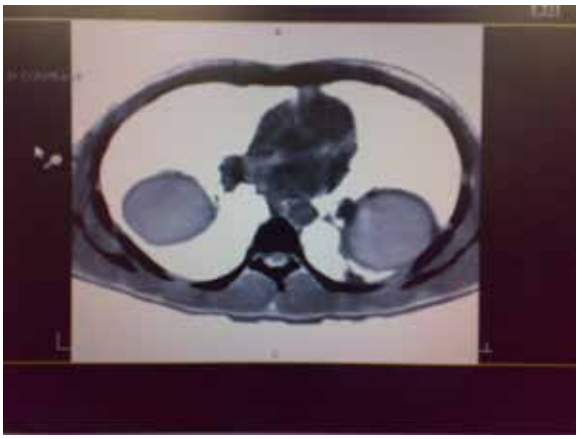

Figure 2

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