



A STUDY ON GIANT HEPATIC HYDATID CYSTS

Pathology

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ABSTRACT

Hydatid cyst is a disease primarily affecting liver. It is caused by *Echinococcus granulosus* (dog tapeworm). A study of five cases of giant hydatid cysts of liver was done in the Department of Pathology, Vijayanagar Institute of Medical Sciences (VIMS), Bellary. Most of the patients belonged to the fourth decade and presented with upper abdominal mass, pain and low grade fever. Preoperative investigations were done to know the location and seeding of hydatid cyst. Both sonography and Computed Tomography (CT) revealed a cystic lesion with vesicles at its periphery. A diagnosis of Hydatid cyst was made. Radical excision of the cyst was done and the sample was sent for histopathology. Grossly the cysts were large measuring 23, 19, 21, 17 and 20 cm respectively. Outer surface showed gray white areas and cut surface showed multiple fluid filled cysts (daughter cysts) and tender coconut peel appearance of the membranes. Histopathology was done for confirmation. These cases highlight that accurate preoperative diagnosis can be made from personal history, typical sonography and CT findings.

KEYWORDS

hydatid cyst, echinococcus granulosus, sonography, computed tomography

INTRODUCTION

The hydatid disease is a global parasitic zoonosis which is caused by larval form of tapeworm *Echinococcus granulosus*. It is serious disease and potentially lethal. It is endemic in India and other countries in the mediterranean, North Africa, New Zealand, Australia, Turkey, South America, Northern China and the Indian subcontinent. It primarily affects the liver but can also involve distant anatomic sites such as lung, kidney, spleen, bone, brain etc. The usual size of a Hydatid cyst is 9-10 cm.

The clinical features are based on the site involved. The diagnosis of non complicated Hydatid cyst of liver is based on clinical suspicion. Ultrasound and Computed Tomography (CT) scan are the most important diagnostic tool, confirmation is done by classical findings seen in histopathology.

MATERIALS AND METHODS

The present study was conducted from October 2020 to August 2021 in the Department of Pathology in VIMS, Bellary. A total of five cases of Giant Hepatic Hydatid cysts were identified. Most of the patients belonged to the fourth decade and presented with upper abdominal mass, pain and low grade fever.

Preoperative investigations were done to know the location and seeding of hydatid cyst. Both sonography and Computed Tomography (CT) revealed a cystic lesion with vesicles at its periphery. A diagnosis of Hydatid cyst was made. Radical excision of the cyst was done and the sample was sent for histopathology for confirmation.

RESULTS



Figure 1: Giant Hydatid cyst with multiple daughter cysts



Figure 2 : Multiple daughter cysts and laminated middle layer on microscopy



Figure 3: Giant Hydatid cyst with tender coconut peel appearance of the membranes and multiple daughter cysts on microscopy.

Gross Findings (External Examination)

The cysts were very large measuring 23, 19, 21, 17 and 20 cm respectively. (Figure 1) Outer surface showed globular, firm to hard grey white mass. Cut surface revealed multiple fluid filled cysts (daughter cysts) and tender coconut peel appearance of the membranes (Figure 2 & 3).

Microscopy findings (Histopathology report)

The cyst comprising of three layers is noted. The outermost layer, called pericyst is fibrous. The middle ectocyst layer showed laminations, hyaline and acellular material. (Figure 2) The innermost endocyst, also called germinative layer is composed of multiple daughter cysts and brood capsules with scolices (Figure 3).

DISCUSSION

Hydatid disease is still a major issue in rural agricultural population of India. It can involve any organ of body but liver is the most common site. It can present with wide variety of symptoms, depending on the organ involved.

In our study, the most common age group involved was 41-50 years which is similar to other studies. Majority of the patients were male and right lobe of the liver was the most common site of involvement. The sizes of the cysts were very large compared to usual cases of Hydatid cysts.

Even though the disease is asymptomatic for many years because of slow growth of the cyst, it is progressive and can cause life threatening complications. It also has a tendency to recur. So early detection of the cases based on clinical suspicion and preoperative investigations like Ultrasound and CT scan are really essential for the management of the cases. It will help to prevent the seeding, dissemination or anaphylactic shock which will ultimately lead to decrease in the morbidity and

mortality in the postoperative period.

These cases highlight that accurate preoperative diagnosis can be made from personal history, typical sonography and CT findings.

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