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**Shabir Ahmad Mir**  
Department Of Surgery,  
Government Medical College  
Srinagar, India

**Zubair Gul**  
Department Of Surgery,  
Government Medical College  
Srinagar, India

**Nayeemul Hassan**  
Department Of Health  
Services, Health Services  
Kashmir, India

**Mumtaz Din Wani**  
Department Of Surgery,  
Government Medical College  
Srinagar, India

**Correspondence**  
**Shabir Ahmad Mir**  
Department Of Surgery,  
Government Medical College  
Srinagar, India

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# Profile of Hydatid Disease of Liver at a Tertiary Care Hospital of Northern India

**Shabir Ahmad Mir, Zubair Gul, Nayeemul Hassan and Mumtaz Din Wani**

### Abstract

**Objective:** to look for the various aspects of hydatid disease of liver in Kashmir.

**Materials and Methods:** This prospective study was conducted over a period of three years from October 2014 to October 2017 in the unit second of the department of surgery in SMHS hospital at Government Medical College, Srinagar.

**Results:** Majority of the patients were from 4<sup>th</sup> to 6<sup>th</sup> decade of life. The mean age was 43 years. The sex incidence revealed female preponderance in the study (M:F ratio of 1:1.5). The right lobe of liver was the most commonly involved in 80 % (64) of the cases and the left lobe in 20% (16) of the cases. There was a solitary cyst in 60 % (48) of the patients and more than 1 cyst in 40% (32) of the patients. More than 50% of the cases presented within second year of the onset of their illness. Majority of patients were from rural areas (64) and remaining (16) were from urban areas. History of contact with animals was available in 48 cases.

**Conclusion:** Hydatid disease of liver in Kashmir is not different from that in other parts well known for hydatid disease of liver. Surgical management is very safe and effective treatment. Prophylactic measures endorsed by the public awareness measures can reduce its incidence.

**Keywords:** Hydatid Disease, Liver and Tertiary Care Hospital

### 1. Introduction

Being the first organ of passage, the liver is the most frequently infected (50%–75%), followed by the lungs (20%–25%) and various other organs (15%–20%) via arterial dissemination [1, 2]. Infection of the cyst can facilitate the development of liver abscesses and mechanic local complications, such as mass effect on bile ducts and vessels that can induce cholestasis, portal hypertension, and Budd-Chiari syndrome [3]. Treatment of hydatid liver cyst has to be considered mandatory in symptomatic cysts and recommended in viable cysts because of the risk of severe complications [4]. Hydatid disease is endemic mainly in the Mediterranean countries (particularly Greece), the Middle East, the Baltic areas, South America, India, northern China, and other sheep-raising areas; however, owing to increased travel and tourism all over the world, it can be found anywhere, even in developed countries [5]. Kashmir is no exception. Being a centrally located tertiary hospital, SMHS hospital caters to the maximum population of Kashmir. Under this background, present study was conducted to look for the various aspects of hydatid disease of liver in Kashmir.

### 2. Material and methods

This prospective study was conducted over a period of three years from October 2014 to October 2017 in the unit second of the department of surgery in SMHS hospital at Government Medical College, Srinagar. Only those cases were included in whom diagnosis had been confirmed by morphological examination of operative specimen showing either daughter cysts or characteristic white laminated membrane, later confirmed by finding of scolices and laminated membrane under the microscope. Eighty (80) such patients were enrolled during this study period. The age, sex, history of contact with dogs, clinical presentation, treatment advised, findings and difficulties encountered during operation, and postoperative management of patients as well as morbidity and mortality were recorded and analyzed.

### 3. Results

Majority of the patients were from 4<sup>th</sup> to 6<sup>th</sup> decade of life. The mean age was 43 years. The sex incidence revealed female preponderance in the study (M:F ratio of 1:1.5). Duration of illness in the present study varied from 1 month to 6 years in case of hydatid disease of liver. Most of the cases were asymptomatic (50%), while pain upper abdomen was the most common symptom, with lump in the right upper abdomen being next, features of Gastric outlet obstruction such as postprandial fullness, recurrent vomiting in 5-10% of the cases and jaundice in few cases. Figure 1 shows Hydatid Cyst of Liver. The right lobe of liver was the most commonly involved in 80 % (64) of the cases and the left lobe in 20% (16) of the cases. There was a solitary cyst in 60 %( 48) of the patients and more than 1 cyst in 40% (32) of the patients. More than 50% of the cases presented within second year of the onset of their illness. Majority of patients were from rural areas (64) and remaining (16) were from urban areas. History of contact with animals was available in 48 cases. All patients were managed surgically. Three patients required emergent surgery and the rest were operated electively. Membranes were retracted in 96% of the patients and only fluid in 4% of the patients. One patient had a ruptured hydatid which was initially managed conservatively then required an elective surgery.

### 4. Discussion

Hydatid disease of liver is a common entity in this part of the world. This study was carried out to assess the clinical presentation and the treatment of hydatid liver disease in a tertiary hospital which catered to most of the population of this region. Around 80 cases presented to our unit over a period of three years which suggests that the disease is common in this region. Most of the cases were asymptomatic(50%), while pain right upper quadrant was the most common presenting symptom in the rest of cases, few presented with features of gastric outlet obstruction like postprandial fullness and vomiting, while some presented with lump or swelling right upper abdomen and very few presented with features like jaundice and other symptoms. Right lobe of the liver was the most commonly involved while left lobe was involved in less number of cases. The disease was more frequent in 4<sup>th</sup> to 6<sup>th</sup> decade of life with mean age of 43 years. Various studies have reported mean age of nearly 40 years which is similar to our study [6-8]. Females accounted for 50 cases outnumbering the males who comprised 30 cases. Among 80 cases, 80% of the patients belonged to rural areas and 20% to urban areas, and history of contact with animals was present in 60% of the cases which suggested that the disease might have been transferred from the handling of animals or eating food contaminated with excreta of the animal, a similar view has also been expressed by previous studies [9-12].

The patients were evaluated with the help of investigations like USG which revealed cystic lesion with or without calcification in 100% of the cases which was further confirmed by a CECT abdomen showing a cystic lesion in liver and also gave information about the size, location and volume of the cystic lesion. The size of the lesion ranged from 2cm to 12cm in largest diameter. In the study conducted by Balik *et al.* (1999), CECT scan showed diagnostic accuracy of 100% <sup>[10]</sup> Hydatid serology was positive in 20% of the cases. Preoperative LFT was done which was within normal range in 95% of the cases and

AST/ALT was slightly raised in 5%. Preoperative albendazole therapy at a dose of 10-15mg/kg/day was started in all cases, with the therapy given for 1 week in majority (90%) and for more than one week in the rest. The same was continued post op for more than one month in all cases. All patients were operated upon for hydatid cyst. Most of the patients were operated electively while 3 required emergent nature of surgery. Intra operatively membranes were retrieved in 96% of the cases and only fluid in 4% of the cases. Intracavitary drain was put in every case. The drain was removed in 7-20 days with average being 15 days. Bile leak persisted in 50% of the cases upto 15 days. One case presented as ruptured Hydatid which was first managed conservatively and then required elective surgery.

Intrabiliary rupture of hepatic hydatid cysts represents the most frequent complication of liver echinococcosis having an incidence rate of 1%-25% (13-15). Post op cavitogram revealed intra biliary communication in 10% of the cases of which 6 resolved spontaneously and 2 were managed by ERCP and stenting. There was no mortality in this study.



**Fig 1:** Shows Hydatid cyst of Liver

### 5. Conclusion

Hydatid disease of liver in Kashmir is not different from that in other parts well known for hydatid disease of liver. Surgical management is very safe and effective treatment. Prophylactic measures endorsed by the public awareness measures can reduce its incidence.

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