

## Descriptive Study of Liver Hydatid Cyst in the Post Graduated Hospital Khost

Said Aref Raoufi<sup>1</sup>, Dr. Abdullah Qadri<sup>1</sup>, Mohammad Qadir Shah Hemat<sup>2</sup> and Nangialai Nangialai<sup>2</sup>

<sup>1</sup>Trainer, Department of General Surgery, Khost, Post Graduated Hospital, AFGHANISTAN.

<sup>1</sup>Lecture, Faculty of Medical, Shiakh Zayed University, AFGHANISTAN.

<sup>2</sup>Head, Department of General Surgery, Khost Post Graduate Hospital, AFGHANISTAN.

<sup>2</sup>Trainer, Department of General Surgery, Khost, Post Graduated Hospital, AFGHANISTAN.

<sup>1</sup>Corresponding Author: saidraoufi@gmail.com



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### ABSTRACT:

**Background:** Liver hydatid cyst is a parasitic disease whose life cycle involves carnivores. And humans can also get infected by swallowing of parasite eggs. This disease can affect both men and women. This disease does not have a severe course; therefore, it is often diagnosed in the mixed stages or when the patient performs abdominal ultrasound examinations due to some other health problems. This is the reason why most of the serious hydatid disease conditions occur. Since Afghanistan is an agricultural country and livestock farming is common there, the possibility and incidence of this disease is very high in human.

This study is a descriptive study in the form of a case series, from the 1400/07/01 to 1401/06/31 (one-year duration), on 40 patients which have been treated in Khost post graduate Hospital.

This is a descriptive study that was conducted in the form of a case series. This study was conducted on 40 patients which had hydatid cyst. These 29 (72.5 %) came from distract and 11(27.5 %) patients are form center of province to Provincial Hospital in 1400/07/01 – 1401/06/31(one-year duration) hejri Shamsi year. In this sampling study has been done by Universal method. In 40 patients who have a hydatid cyst of the liver, 29 patients representing 72.5% of the cases are from the districts and 11 from the center of Khost representing 27.5%. according to age, the most cases occurred in people under 30 years of age (28 people), which make up 59.5 %, 7 people were between 30 and 50 years old, 17.5 % and 5 people were over 50 years old. Which is 12.5 %. From the point of view of gender, the most cases are women (27), which make up 67.5 %. And 13 men, which constitute 32.5 % of the cases. From the point of view of cyst size, 25 patients whose cyst size was less than 7 cm and 70 % of patients and 15 patients whose cyst size was more than 9 cm showed 30 % cases. Open surgery was performed on all the above patients (100 %). According to complications, 2 patients had cyst rupture, which was 5 %, and one patient had a obstructive jaundice, which was 2.5 %.

**Methodology:** This is a descriptive study that was conducted in the form of a case series. This study was conducted on 40 patients which had hydatid cyst. These 29 (72.5 %) came from distract and 11(27.5 %) patients are form center of province to Provincial Hospital in 1400/07/01 – 1401/06/31(one-year duration) hejri Shamsi year. In this sampling study has been done by Universal method.

**Discussion:** In our research, it is seen that the total number of inpatient surgical cases is 1605 people or 100 %, of which 40 people or 2.29 % are liver hydatid cyst patients and the remaining 1565 people or 97.71 % are non-surgical hospitalized patients. which were under study and research. Our research results show that among the 40 patients with liver cysts, 27 or 67.5 % are women and 13 or 32.5 % are men. 28 patients or 59.5 % of them are under 30 years old, 7 patients or 17.5 % of them are 30 to 50 years old and 5 patients or 10.7 % of them are over 50 years old. Out of 40 patients with hydatid cyst, 29 or 72.5 % of them are from the suburbs or nearby provinces and the remaining 11 patients or 27.5 % are from the center.

**Conclusion:** The total number of patients registered and admitted to the Khost Post Graduate Hospital in 1400/07/01 to 1401/06/31 (one-year duration), among which a number of patients were diagnosed with liver cyst and underwent surgery. The infection in women was more than men in this research because public awareness is low and contact with the real host is more.

**Research question:** What is the pattern and frequency of cases of liver hydatid cyst in the post graduate hospital of Khost During 1400/07/01 to 1401/06/31 (one-year duration)?

**Keywords-** hydatid cyst of the liver, cyst size, complications, treatment.

## I. INTRODUCTION

Since there are many cases of hydatid cyst patients in Khost province, the department assigned me to do a descriptive study of hydatid cyst cases in the post graduate hospital of Khost. Liver hydatid cyst, which is such a zoonotic disease, if not diagnosed and nor treated on time, then cyst rupture may occur. And causes death of patient.

In the preparation of this research article, reliable medical sources were used, and for this research work, the data of patients who came to general surgery department of the post graduate hospital khsot in the 1400/07/01 to 1401/06/31 (one-year duration), were used, collected and analyzed.

## II. RESEARCH QUESTION

What is the pattern and frequency of cases of liver hydatid cyst in the post graduate hospital of Khost During 1400/07/01 to 1401/06/31 (one-year duration)?

## III. METHODOLOGY

This is a descriptive study that was conducted in the form of a case series. This study was conducted on 40 patients which had hydatid cyst. These 29 (72.5 %) came from district and 11(27.5 %) patients are from center of province to Provincial Hospital in 1400/07/01 – 1401/06/31(one year duration) hejri Shamsi year. In this sampling study has been done by Universal method.

## IV. RESEARCH VALUE

In Khost province, there has not been complete research on the surgical treatment of hydatid cyst of the liver, and also patients from all districts of Khost province are visiting Khost provincial hospital due to wrong diagnosis, incomplete treatment, surgical team of Sarapa clinics. The existence of remote areas, increased contact between humans and animals, the destruction of communication routes and the lack of awareness among the people has caused the increase in the incidence of complications and deaths. To be done so that it remains a foundation for future research doctors.

## V. USAGE AND BENEFIT OF THIS RESEARCH IN AFGHANISTAN HEALTH SYSTEM

This disease is causing disability and financial losses to the young generation of our country, so we have decided to conduct a thorough descriptive investigation of the incidence of this dangerous disease in order to fully understand in our country. Real cases, the best type of treatment and its complications and solutions to other related problems should be explained

in detail, and in this way the loss of financial resources and the spread of the disease can be reduced. If there is more public awareness in this area and complete information related to this disease, then the patient will be diagnosed on time and the length of patient's bed stay will be reduced and the service pressure on the health services will also be reduced.

Research parameters: The following different parameters have been taken into consideration to investigate the incidence of this disease:

- Age, sex, place of residence, cyst size, complications, type of treatment and procedure, operative complications.

**Table 1: Ratio of all hydatid liver cyst patients to all inpatients**

Types of Patients	The Number	Percentage
All inpatients	2275	100%
Hydatid cyst patients	40	1.75%

In the above table, it can be seen that all 2275 patients, i.e., 100 %, were admitted to the hospital.

**Table 2: Relative to all operative patients, number and percentage**

Types of Patients	The Number	Percentage
All inpatients	1605	100%
Hydatid cyst patients	40	2,49 %

In the above table, it can be seen that 40 of all 1605 operated patients are liver hydatid patients, which constitutes 2.49 % of all patients.

**Table 3: Number and percentage of post-operative complications.**

Types of Patients	The Number	Percentage
All patients	40	100%
The rupture	2	5%
Old man	1	2.50%

In the above table and graph, it is known that there are 40 patients out of which 2 (5 %) ruptured and 1 (2.5 %) ruptured.

**Table 4: Number and percentage of patients cording to treatment type.**

Types of Patients	The Number	Percentage
All patients	40	100%
Surgery open	40	100%
Laparoscopy	0	0%

It can be seen in the above table that all the patients were operated by open surgery.

**Table 5: Incidence, number and percentage of cystic fibrosis by age**

All Events	Percentage	The Number	Sun
40	59.50%	28	>30 years old
	17,5%	7	30-50 years old
	12,5%	5	< 50 years old

In the above table, the most cases of cysts occurred in the age below 30 years and the least cases occurred in the age above 50 years.

**Table 6: Incidence of hydatid cyst by sex**

Types of Patients	The Number	Percentage
Total	40	100%
Masculine	13	32,5%
Feminine	27	67,5%

In the above table, 29 patients (32.5 %) of the operated patients are male and 11 (67.5 %) are female patients.

**Table 7: Number and percentage of patients by cystic size**

Types of Patients	The number	Percentage
All patients	40	100%
More than 7 cm	25	70%
More than 9 cm	15	30%

Above table demonstrate the number and percentage of hydatid cyst size.

**Table 8: Number and percentage of patients by type of procedure**

Types of patients	The number	Percentage
All patients	40	100%
Fluid instillation	23	57.50%
Internal obliteration	3	7.50%
Cystectomy	4	10%
Liver resection	1	2.50%
External drainage	3	7.50%
Omentoplasty	5	12.50%
Leave open	2	5%

In the above, the types of procedures are shown by number and percentage.

**Table 9: Operative complications, number and percentage of patient with liver hydatid cyst**

Operative complications in patients with hepatic cysts		
Mixing	The number	Percentage
Prolong bile	7	15%

drainage		
Wound infection	4	8.50%
sentence patients	11	23.50%

The table above show the statistics of complications in patients with liver hydatid cyst.

## VI. LITERATURE REVIEWS

### *Descriptive Overview:*

In this research study, the material has been obtained from modern and reliable medical books and known medical web pages:

In order for our research to be definitely in line with international research, we have also looked at international literature in detail, which has been done in a prospective and a respective way.

### **1. Research of Aga Khan Hospital, Karachi, Pakistan:**

This study was done retrospectively by Sohaila M and Rizwan A in the Aga Khan Hospital, Pakistan between Dec. 1998 and Oct. 2004 on 44 patients. The results were as follows:

- All patients whose cysts were larger than 15 cm and complicated, which is not proper for radiologic intervention.
- 24 people or 54.55% were female and the remaining 20 people or 45.45% were male.
- The patients' ages ranged from 19 to 81 years.
- More than 50% of patients had single liver hydatid cyst.
- The main complication was biliary leakage which occurred in 8 patients.
- In 13 patients there was fistula between cyst and the biliary tract. (7)

### **2. Russian Belgrade Hospital Research:**

This descriptive study was conducted by Milicevic MN at the Belgrade hospital between 1963 and 2004 on about 1075 people who underwent surgery for the diagnosis of liver hydatid cyst. The results of the study are as follows:

- In 66.4% cases the cyst was located in the right lobe of the liver.
- 79.9% of patients visited the hospital without cardiac complications.
- At the time of admission in hospital, 19.9% of patients had CBC, 9.9% had infected cysts, and 1.4% had ruptured to peritoneal cavity.
- Surgical complications occurred in 22.3% of patients, among those patients 65% were surgical site infections and chest problems.
- The patient mortality rate was 2.2%.
- Partial pericystectomy or introflection + omentoplasty procedure was done in 57.7% of patients. (8)

### 3. North Dakota Hospital Research:

This study was conducted retrospectively by Raymond SJPS at the University of North Dakota in 2004 year on 769 patients. The results were as follows:

- Radical Surgery and PAIR procedures were performed in most of the patients.
- Radical cystectomy method has been advocated more than other procedures.
- Mortality rate was less than 0.1% from PAIR method, which was caused by anaphylactic shock and 0.7% from surgery, which was mostly respiratory problems (3 patients), liver failure (1 patient), heart attack (1 patient), general Peritonitis (1 patient) and spontaneous anaphylaxis (1 patient) were due. (9)

## VII. DISCUSSION

In our research, it is seen that the total number of inpatient surgical cases is 1605 people or 100 %, of which 40 people or 2.29 % are liver hydatid cyst patients and the remaining 1565 people or 97.71 % are non-surgical hospitalized patients. which were under study and research. Our research results show that among the 40 patients with liver cysts, 27 or 67.5 % are women and 13 or 32.5 % are men. 28 patients or 59.5 % of them are under 30 years old, 7 patients or 17.5 % of them are 30 to 50 years old and 5 patients or 10.7 % of them are over 50 years old. Out of 40 patients with hydatid cyst, 29 or 72.5 % of them are from the suburbs or nearby provinces and the remaining 11 patients or 27.5 % are from the center. Among the 40 patients with hydatid cyst of the liver who visited Khost post graduated Hospital, 2 patients (5 %) were referred with cyst rupture and 1 patient (1 %) was referred with jaundice. In all patients with liver hydatid cyst, which is 40 people or 100 %, open surgery was performed. According to the type of procedure, fluid instillation method was used in 23 patients or 57.5 %, in 5 patients or 12.5 %. percentage is Omentoplasty, Cystectomy in 4 patients or 10 %, Internal Obliteration method in 3 patients or 7.5 %, External drainage in 3 patients or 7.5 %, Leave open in 2 patients or 5 % and the remaining 1 2.5% of patients underwent liver resection surgery. Among the 40 patients or 100 % of the patients with liver hydatid cyst, 7 of them or 15 % had a surgical complication of bile leakage, and the remaining 4 patients, which is 8.5 %, had a surgical complication of wound infection or surgical infection.

## VIII. CONCLUSION

1- The total number of patients registered and admitted to the Khost Post Graduate Hospital in 1400/07/01 to 1401/06/31 (one-year duration), among which a number of patients were diagnosed with liver cyst and underwent surgery.

2- The infection in women was more than men in this research because public awareness is low and contact with the real host is more.

3- 3-Transe Kocher incision It was easy to access to all the parts of liver.

4- The use of anthelmintic drugs together with surgical treatment increases the result of surgical treatment several times.

5- 5-Drainage and making of small cavity increase healing and reduce bed time.

6- 6- If the cyst is large, the best method of operation is Segmental Resection.

### Limitations:

- There was not enough time for our research.
- There is no regular availability of files in hospitals.
- Other deficiencies have been completed.
- There was proper contact for communication with patients.
- Patients did not come back regularly for follow-up.
- There were enough courses for research.

### Suggestions:

1. During my research, the only diagnostic tool was ultrasound, so I suggest to the honorable Ministry of Public Health to facilitate enough diagnostic facility such as CT scan, MRI e.t.c

2. During my research, there was a lot of emphasis on laparoscopic surgery for medical surgeons, so I suggest to Ministry of Public Health that fascilited laparoscopic operation in khost post graduated hospital for all surgeons.

3. Also, we suggest to the respected official of the Ministry of Public Health to ask for specialized educational scholarships outside the country so that the difference and distance between our country and the developed world can be eliminated. If you bring it and implement it in practice, the difference and distance that exists will disappear and our country will benefit from this service.

4. It is suggested to the Ministry of Public Health that special hospitals should be established at the capital Kabul and provinces for patients infected with HBS, HCV, and HIV, and that all the personnel of these hospitals should be given the right to vaccination and special protection. It can be found and it will play a big role in infection control.

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