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Clinicopathological Study of Hepatic Sol at Tertiary Care Centre Bikaner

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Abstract

Background: Different liver SOL has different etiology and risk factor, so it is important to find out etiology and risk factor in Indian subcontinent, which would help us to treat different kind of SOL of liver

Methods: Hospital based cross-sctional study conducted at Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner. All the cases with primary space occupying lesion of the liver age more than 18 years having hepatic masses primary in origin were included in our study.

Results: In present study most common cause of hepatic sol was amoebic abscess(38.00%) followed by pyogenic abscess(34.00%) , hepatocellular carcinoma (14.00%), haemangioma (4.00%), simple cyst(6.00%) and hydatid cyst(4.00%).

Conclusion: Most common cause of hepatic SOL was amoebic abscess followed by pyogenic abscess.

Keywords: SOL, Hepatic, Simple cyst.

Introduction

Space Occupying Lesion (SOL) on liver can be caused by various diseases that may or may not be manifested with symptoms. Mass lesions of the liver occur quite frequently, thus clinicians interested in liver diseases should have a thorough understanding of their presentations, diagnosis and treatment. Hepatic mass lesions include tumors, tumor-like lesions, abscesses, cysts, hemartomas and confluent granulomas. The frequency with which each is seen varies in different geographic regions and different populations.

Modern imaging techniques have led to the recognition of some incidental lesions that usually have no clinical relevance, e.g. simple renal cysts, liver capillary haemangiomas. Simple hepatic cysts are a congenital abnormality that are usually asymptomatic, but, as with all lesions that may have either no clinical importance or may be part of a defined condition or syndrome (e.g. polycystic kidneys, von Hippel-Lindau disease), the prevalence and characteristics of these lesions within the population should be known[1].

Fine Needle Aspiration cytology is the study of cells obtained by vacuum. In cytology cell morphology is the preserved element of study, rest all the tissue elements are exhausted. But, the accuracy of Fine Needle Aspiration Cytology when applied by experienced and well trained practitioners can approach

that of Histopathological Examination in providing an unequivocal diagnosis[2].

Different liver SOL has different etiology and risk factor, so it is important to find out etiology and risk factor in Indian subcontinent, which would help us to treat different kind of SOL of liver.

Material and Methods

Study design: Hospital based cross-sctional study.

Study duration: 12 months.

Study place: Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner

Study population: All the cases with primary space occupying lesion of the liver

Sampling Method: Convenience sampling

Inclusion Criteria

All adult patients more than 18 years having hepatic masses primary in origin

Exclusion Criteria

- Non cooperative patients
- Patient with suspected secondaries in liver , bleeding diathesis and on anticoagulant medication.

Data Collection: All the cases with primary space occupying lesion of the liver was evaluated with history, clinical examination,blood investigation, liver function , FNAC and radiological examination like ultrasound and clinico – pathological relation is carried out.

Data Analysis: To collect required information from eligible patients a pre-structured pre-tested Proforma was used. For data analysis Microsoft excel and statistical software SPSS was used and data was analyzed with the help of frequencies, figures, proportions, measures of central tendency, appropriate statistical test.

Observations

Table 1: Age wise distribution

Age group (yrs)	No of patients	Percentage
<30	8	16.00
31-45	20	40.00
46-60	16	32.00
>60	6	12.00
Total	50	100.00

Fifty patients were enrolled into the study. Out of 50 patients, 16% patients belonged to less than 40 years, 40% patients were belonged to 31-45 years, 32%patients were belonged to46-60 years and 12% patients belonged to more than 60 years age respectively.

Table 2: Sex wise distribution

Sex	No of patients	Percentage
Male	34	68.00
Female	16	32.00
Total	50	100.00

Fifty patients were enrolled into the study. Out of 50 patients, 68.00% patients were male and 32.00% patients were female.

Table 3. Etiology wise distribution

Etiology	No of patients	Percentage
Amoebic Abscess	19	38.00
Pyogenic Abscess	17	34.00
Hepatocellular Ca	7	14.00
Haemangioma	2	4.00
Simple Cyst	3	6.00
Hydatid Cyst	2	4.00
Total	50	100.00

In present study most common cause of hepatic sol was amoebic abscess(38.00%) followed by pyogenic abscess(34.00%) , hepatocellular carcinoma (14.00%),

haemangioma (4.00%), simple cyst(6.00%) and hydatid cyst(4.00%).

Table 4: Symptoms of patients

Symptoms	No of patients	Percentage
Nausea	46	92.00
Vomiting	46	92.00
Fever	29	58.00
Pain abdomen	34	68.00
Mass abdomen	13	26.00
Chest pain	6	12.00
Breath lessness	2	4.00

In present study most common symptoms of hepatic sol was nausea & vomiting (92.00%) followed by pain abdomen(64.00%), fever (58.00%) , mass abdomeb (26.00%), chest pain (6.00%) and breath lessness(4.00%).

Table 5: Sign of patients

Sign	No of patients	Percentage
Hepatomegaly	42	84.00
Tenderness	22	44.00
Ascites	4	8.00

In present study most common signs of hepatic sol was hepatomegaly (84.00%) followed by tenderness (44.00%) and ascites(8.00%).

Table 6: Lab investigastion

Lab investigastion	No of patients	Percentage
Raised TLC	19	38.00
Raised bilirubin	16	32.00
Raised SGOT	46	92.00
Raised SGPT	46	92.00
Raised alakaline phosphate	46	92.00

Out of 50 cases,38.00% had raised TLC, 32.00% had raised s.bilirubin, 92.00% had raised SGOT, raised and raised alkaline phaosphatase.

Discussion

Hospital based cross-sctional study conducted at Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner. All the cases with primary space occupying lesion of the liver age more than 18 years having hepatic masses primary in origin were included in our study.

Space-occupying liver lesions usually present with abdominal pain or abnormal physical findings such as a palpable abdominal mass or distention.

Liver lesions identified in children include benign and malignant neoplasms, inflammatory masses, cysts, and metastatic lesions. Two-thirds of liver lesions in children are malignant. Hepatoblastoma accounts for two-thirds of malignant liver tumors in children. Benign lesions of the liver in children include vascular lesions, hamartomas, adenomas, and focal nodular hyperplasia. Although benign and malignant liver masses share some clinical manifestations, treatment and prognosis differ. Evaluation involves physical examination, imaging evaluation, and laboratory investigations such as serological markers [alpha-fetoprotein (AFP)] for malignant liver lesions. Ultrasound is the initial imaging modality of choice because it can detect, characterize, and provide the extent of liver lesions. However, CT or magnetic resonance imaging (MRI) is often subsequently performed for further characterization, assessment of precise extent, and detection of associated metastatic disease in cases of malignant hepatic neoplasm. Serological markers (such as AFP) can be useful in narrowing the differential diagnosis when they are markedly elevated, but a substantial number of patients,

unfortunately, do not have high levels of these markers at the time of presentation or cautious interpretation is warranted as AFP level is frequently elevated in infants up to 6 months of age and may be slightly elevated with benign tumors and with hepatic insult or regeneration. Therefore, a tissue diagnosis is often required to guide subsequent management. The histology and anatomy of a pediatric liver tumor guide the treatment and prognosis.[3-4]

Fifty patients were enrolled into the study. Out of 50 patients, 16% patients belonged to less than 40 years, 40% patients were belonged to 31-45 years, 32%patients were belonged to46-60 years and 12% patients belonged to more than 60 years age respectively. 68.00% patients were male and 32.00% patients were female.

Mallick et. al.[5] was observed that maximum number of liver SOL is found 51-60yrs age group (27.5%). Male are commonly affected than female. Out of 40 patients 28(70%) patients were male and 12(30%) patients were female.

Alom siddhique et al[6] and Khan et al[7] reported peak incidence of age between 21 -50yrs where in this study, peak incidence of age is 44 – 63yrs. males were predominant 88% than females, whereas this study concurs with above by 86% of males predominant than females.

In present study most common cause of hepatic sol was amoebic abscess(38.00%) followed by pyogenic abscess(34.00%) , hepatocellular carcinoma (14.00%), haemangioma (4.00%), simple cyst(6.00%) and hydatid cyst(4.00%).

Mallick et. al.[5] was observed that among 40 patients 13(32.5%) had metastatic adeno carcinaoma, 8(20%) patients had amoebic liver abscess, 6(15%) patients had pyogenic abscess, 4(10%)patients had haemangioma, 3(7.5%) patients had hepatocellular carcinoma. 2(5%) patients had simple cyst, 1(2.5%) patient had adenoma, 1(2.5%) patient had focal nodular hyperplasia. 1(2.5%) patient had hydatid cyst, 1(2.5%) had metastatic neuro-endocrine carcinoma.

A study by Dr. Syed Mehdi Raza Rizvi[8], Allied Hospital, Faisalabad[7] revealed that primary liver malignancy were 61.6%, metastatic liver malignancy were 16.7%, liver abscess were 8.3%, focal nodular hyperplasia were 5%, simple cyst were 5%, hemangiomas were 3.3% out of 120 patients. In comparison to this study, it has been seen that in our study metastatic adenocarcinoma and liver abscesses occurring more frequently. This difference may be due to difference in number of patients studied.

In present study most common symptoms of hepatic sol was nausea & vomiting (92.00%) followed by pain abdomen(64.00%), fever (58.00%) , mass abdomeb (26.00%), chest pain (6.00%) and breath lessness(4.00%). most common signs of hepatic sol was hepatomegaly (84.00%) followed by tenderness (44.00%) and ascites(8.00%).38.00% had raised TLC, 32.00% had raised s.bilirubin, 92.00% had raised SGOT, raised and raised alkaline phaosphatase.

Alom siddhique et al[6] stated presence of fever in 89% and 100%, jaundice in 0% and 8.33%, nausea and vomiting in 39% and 50%, dysentery in 6% and 0%, productive cough in 15% and 0%, lower chest pain in 30% and 66%, breathlessness in 30% and 50% in ALA and PLA respectively.

Mallick et. al.[5] was observed that fever present in 80%(n=29) and 100%(n=13), jaundice 15% (n=6)and 57%(n=7), nausea and vomiting in 65%(n=24) and 80%(n=10), dysentery in 33%(n=12) and 0%(n=0), productive cough in 26% (n=9)and 48%(n=6), lower chest pain in 48%(n=18) and 68%(n=9), breathlessness

in 26%(n=9) and 48%(n=6) in ALA and PLA respectively, which is concurring with the above.

Srivatsava ED et al [9] reported tender hepatomegaly in 40% and 89%, ascites in20% and 55% of ALA and PLA respectively.

Conclusion

Most common cause of hepatic SOL was amoebic abscess followed by pyogenic abscess.

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