



HYDATID CYST WITH UNUSUAL LOCALISATION

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ABSTRACT The aim of this study was to find out the incidence of unusual location of hydatid cyst in the human body. Hydatid cyst is an endemic illness in many countries, and it poses an important public health problem that is influenced by peoples' socioeconomic status and migration that spreads this disease. This disease involves all human parts and most commonly affects the liver. Incidence of unusual site is about 8-10%. A retrospective study of Hydatid cyst was carried for a period of five years. A total of 35 cases were diagnosed as Hydatid cyst and the results with different sites of the cyst were statistically presented. Out of 35 cases reported as hydatid cyst, 23 were of liver Hydatid cyst. 12 cases were encountered to be present in unusual sites as follows- Spine, breast, ovary, spleen, parotid and brain. Hydatid cyst can affect any organ in the body from head to toe, and a high incidence is found in endemic regions.

KEYWORDS : Endemic, Incidence, Sites

INTRODUCTION

Hydatid disease (HD) is endemic in the Middle East Africa, South America, New Zealand, Australia, Turkey, and Southern Europe, but foci are common in almost every part of the world including India where the highest prevalence is reported in Andhra Pradesh, Tamil Nadu, and Jammu and Kashmir. Infestation by *Echinococcus granulosus* in humans most commonly occurs in the liver (55-70%) followed by the lung (18-35%); the two organs can be affected simultaneously in about 5-13% of cases. Incidence of unusual sites is about 8-10%. Incidence of HD involving the spleen, kidney, peritoneal cavity, skin and muscles is about 2% each and incidence of the heart, brain, vertebral column, ovaries, pancreas, gallbladder, thyroid gland, breast, and bones involvement is about 1% each.¹

Morphologically hydatid cyst has 3 layers, outer fibrous layer formed by host tissue, middle acellular layer that shows concentric laminated membrane on microscopy. Inner germinal layer is thin, translucent grossly, which is one cell thick with attached brood capsules and protoscolices. A clinical diagnosis of Cystic echinococcosis requires combination of physical examination, imaging techniques and serological test by ELISA. Though radiological signs are normally non-specific, Computed tomography, Magnetic resonance imaging and ultrasonography are useful for deep seated lesions in all organs.² The aim of this study is to highlight the fact that this disease should be suspected in cystic lesions involving any organ in the body, especially in endemic areas like India. Even though, hydatid cysts can affect any organ, the disease is uncommon in the organs cited here.

OBJECTIVES

Diagnosis of Hydatid cystic disease at unusual sites like pancreas, kidney, retroperitoneum, bone and brain often pose preoperative diagnostic difficulties, compared to those at common organs like liver and lung even in endemic areas. The present study is conducted to estimate the incidence of Hydatid cystic disease at rare sites, among all the Hydatid cystic disease cases

MATERIAL AND METHODS

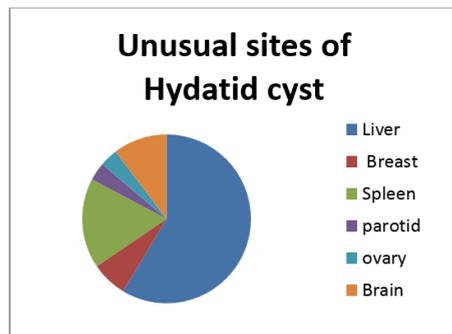
The present retrospective study was conducted in the department of Pathology, JLN Medical College, Ajmer, Rajasthan. during a period of five years from January 2015 to December 2019. All the cases morphologically diagnosed as Hydatid cystic disease during this period were included in the study. A special emphasis was made in the study on cases which presented at unusual sites. Specimens were fixed in formalin; Histopathological diagnosis was made on routine H&E sections.

Table/Fig 1: Age incidence (unusual cases)

Age in years	No. of cases	Incidence%
20-30	1	12.5
30-40	1	12.5
40-50	6	50
50-60	2	12.5
60-70	2	12.5

RESULTS

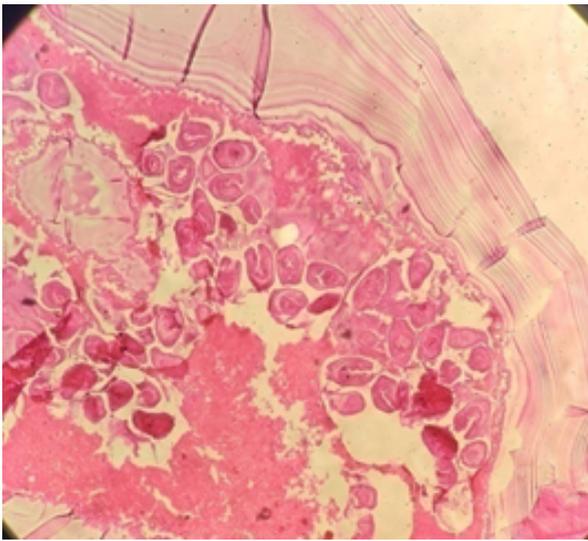
A total no of 35 cases which were diagnosed as cystic echinococcosis on HPE during study period are included in the present study. Out of total no of 35 cases that were diagnosed as Hydatid cystic disease 12 cases were found to present in unusual sites. Two cases were reported in breast, five in spleen, two in brain and one each in parotid and ovary were diagnosed.



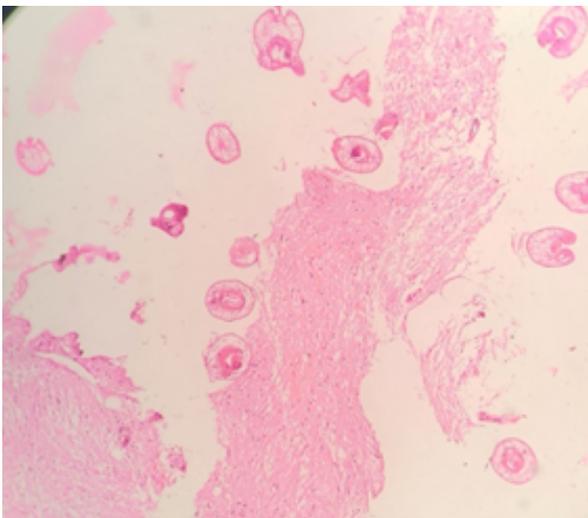
PIE CHART SHOWING DIFFERENT SITES OF CASES DIAGNOSED AS HYDATID CYST.



Table/Fig 2 HYDATID CYST WITH FLUID AND DAUGHTER CYSTS AS SEEN GROSSLY



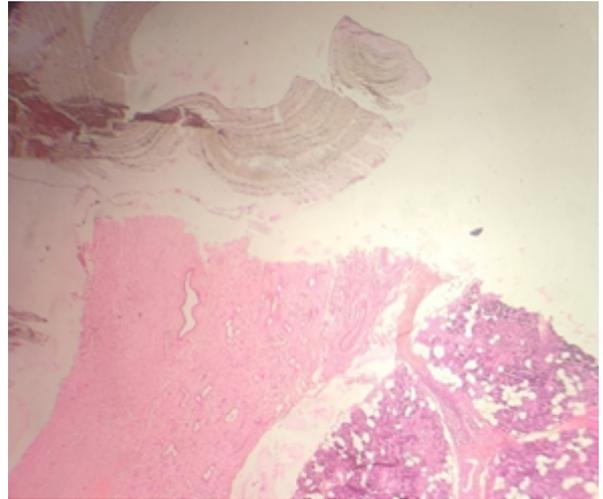
Table/Fig 3 - H & E SECTION (10X) SHOWS HYDATID CYST WITH LAMINATED MEMBRANES ALONG WITH DAUGHTER CYSTS WITHIN SPLEEN.



Table/Fig 4 H & E SECTION (10X) SHOWS HYDATID CYST WITH LAMINATED MEMBRANES ALONG WITH DAUGHTER CYSTS WITHIN BRAIN.



Table/Fig 5 H & E SECTION (10X) SHOWS HYDATID CYST WITH LAMINATED MEMBRANE WITHIN BREAST.



Table/Fig 6 H & E SECTION (10X) SHOWS HYDATID CYST WITH LAMINATED MEMBRANES WITHIN PAROTID.

DISCUSSION

Hippocrates was first to illustrate a liver hydatid cyst and pioneered techniques of treatment.³ More than 80-90% of hydatid cysts occur in the liver, lungs, or both. Hydatid cysts have been reported infrequently in the spleen, kidney, peritoneal cavity, skin and muscles and rarely involve the heart, brain, vertebral column, ovaries, pancreas, gallbladder, thyroid gland, breast, and bones. HD is diagnosed mainly by history, examination and by radiological imaging.

Hydatid cystic disease is endemic in several countries and constitutes a major public health problem, in several other countries, it is an emerging and reemerging chronic disease.^{4,5} Primary echinococcosis is caused by ingestion of eggs, which hatch into larvae in the intestine. Embryo enters the circulation by penetrating the mucosa of intestine. In most of the cases final destination is through portal circulation into liver. If embryo continues through pulmonary capillary bed and enters systemic circulation Hydatid cyst can lodge and develop at any organ or site in the body.⁶ Organs also may be reached through lymphatics resulting in primary Hydatid cyst. Secondary echinococcosis follows spillage of small daughter cysts or protoscolices due to trauma or surgery.

Cystic echinococcosis remains an important health issue in developing countries because of the lack of strict control programs to prevent the transmission of this infection plagued by other problems such as high populations of stray dogs, illegal slaughtering of animals, and poor public education, and awareness about the disease.^{7,8} The liver (50-70%) followed by the lung (20-30%) continue to be the commonly affected organs encountered in surgical practice. Typically, cystic hydatidosis consists of a single unilocular cyst. However, in as much as 30% of cases, there may be synchronous multiple cysts located in the same or multiple organs Pre-operative diagnosis of a hydatid cyst poses diagnostic challenges, and moreover the clinically slow growing nature of the cyst resembles soft tissue tumors.⁹ Ultrasound, CT, and magnetic resonance imaging have a valuable role in preoperative diagnosis as well as follow-up of cases of hydatid disease.¹⁰ The role of fine-needle aspiration cytology (FNAC) has often been controversial as there are concerns over the microscopic spillage along the needle tract. Concerns over microscopic spillage along the needle tract at the time of needle biopsy do not appear warranted, especially when patients receive subsequent medical treatment and biopsy tracts are resected at the time of definitive surgery.¹¹

CONCLUSION

Hydatid disease is a complex chronic infection, when it occurs in rare sites preoperative diagnosis poses a challenge because of atypical clinical presentation. Hydatid cystic disease should always be suspected in all cystic lesions of radio imaging investigations particularly in endemic areas to prevent life threatening complications and avoid unnecessary radical surgeries.

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