



CLINICOAETIOLOGICAL STUDY OF ASCITES

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ABSTRACT There are few clinicoaetiological studies done on ascites in India. We conducted a retrospective study of 15 patients of ultra sonography (USG) proven ascites in tertiary care centre. Availability of non-invasive investigation like ultra sonography (USG) abdomen has increased our early recognition of ascites.

KEYWORDS : ASCITES,ULTRA SONOGRAPHY (USG).

Introduction: common clinical, radiological and patho physiological features form the basis collectively referring to a complex group of disorder as the ascites. The prominent feature in ascites is fluid collection in abdomen. Which produces abdominal distention. Diagnosis can be made by the combination of clinical and ultra sonography (USG) features. Abdominal paracentesis is not required in most of the cases. Development of ultra sonography (USG) added to our diagnostic strategies. There are few clinicoaetiological studies done on ascites. The present study was planned to analyze the spectrum of ascites. Our aim of the study was to find out common etiology, common presentations, signs, patterns of ascites.

Material and Methods: A study of total 15 patients was done. This was a retrospective, observational, epidemiological study. Patient initially suspected to have ascites, undergo ultra sonography (USG) abdomen. Patient who were confirmed by ultra sonography (USG) have ascites, were included in this study. Careful history, general and systemic examination was done followed by ultra sonography (USG) examination, ascitic fluid analysis including routine liver function tests, renal function test, acid fast bacilli, gramstain, culture and sensitivity were carried out in patient with ascites. Ultra sonography (USG) abdomen, ascitic fluid analysis like ascitic fluid amylase, lipase, Total count (TC), Differential count (DC), glucose, proteins and Adenosine Deaminase (ADA) levels were also done in all patients.

Results: The mean age of the patient presented with ascites was 40 years in our study. In our study 40% were female patients. Most of the patients presented with progressive abdominal distension and abdominal pain. In gastro intestinal system examination 60% had tenderness in epigastric and iliac foassa region. Ultra sonography (USG) abdomen was carried out in all cases. A confirmed diagnosis of ascites made with ultra sonography (USG) abdomen. In our study prominent ultra sonography (USG) feature is 100% of cases having fluid collection in abdomen. Ascitic fluid analysis was done in all 13 patients. In most of the cases Total count (TC), Differential count (DC), glucose, proteins and ADA done. 13% of cases showing raised amylase and lipase levels, 20% of cases having raised Adenosine Deaminase (ADA) levels seen. In our study 63% of cases of ascites is due to cirrhosis. 20% of cases is due to Tuberculosis of abdomen, 13% of cases is due to pancreatitis, each 6% of cases is due to viral fever (dengue) and congestive heart failure (CHF).

Discussion: Ascites is free fluid within the peritoneal cavity.

Cirrhosis is the commonest cause of ascites in the Western world 75%, followed by peritoneal malignancy (12%), cardiac failure (5%) and peritoneal tuberculosis (2%)¹. In our study 63% of cases of ascites is due to cirrhosis. 20% of cases is due to Tuberculosis of abdomen, 13% of cases is due to pancreatitis, each 6% of cases is due to viral fever (dengue) and congestive heart failure (CHF). Comparative to western studies of ascites where peritoneal malignancy is second common cause for ascites but in our study conducted in developing country like India showing infectious diseases are second common causes of ascites.

The mechanisms of ascites formation in cirrhosis are complex but portal (sinusoidal) hypertension and renal retention of sodium are universal. Abdominal tuberculosis can occur primarily or it can be secondary to a tubercular focus elsewhere in the body. Infection by Mycobacterium tuberculosis causing abdominal tuberculosis is acquired in following ways: Dissemination of primary pulmonary tuberculosis, Swallowing of infected sputum, Hematogenous dissemination, lymphatic spread from infected mesenteric lymph nodes, Peritoneal involvement occurs in 4-10% patients of extrapulmonary tuberculosis (EPTB)². This abdominal tuberculosis patients having mesenteric lymphnodes. Pancreatic ascites is characterised by accumulation of high amylase fluid in the peritoneal cavity due to leakage of pancreatic juice from a disrupted pancreatic duct and a diagnosis is usually made once the aspirated fluid is high in protein (>3g/dl) and high in amylase (>1000 IU/L)³. Ascites in Dengue fever is manifestation of endothelial damage leading to leakage of fluid, which an indicator of severity of dengue fever⁴. Ascites occurs in response to elevated central venous pressures by retarding emptying of the peritoneal veins and the hepatic veins in congestive heart failure⁵. The most frequent symptoms are increased abdominal girth (the patient notices tightness of the belt or garments around the waist) and recent weight gain. As fluid continues to accumulate, it leads to elevation of the diaphragm that may cause shortness of breath. Fluid accumulation may also be associated with a feeling of satiety and generalized abdominal pain.

Progressive abdominal distention was present in 80% of cases. Abdominal pain was found in 40% cases in present study. In Tb peritonitis causing ascites symptomatology mainly includes (i) constitutional symptoms in about one-third of patients (fever, malaise, anaemia, night sweats, loss of weight, weakness), and (ii) local symptoms and signs referable to the site involved. Raised jugular venous pressure (JVP), pedal oedema, bilateral basal

crepitations present in heart failure patients. Patients with viral fevers with mild ascetic fluid having low platelet count and bleeding manifestations present.

Conclusion: Our study suggests that Ascites is common in India. Ascites must be suspected in patients with specific symptoms, signs and further investigations like USG test and blood investigations should be done. A good clinician can make accurate diagnosis of Ascites without paracentesis with a high specificity (>90%) following detailed clinical assessment.



Diagram representing cirrhosis of liver with ascites

References:

1. Sherlock's Diseases of the Liver and Biliary System, Twelfth Edition. Edited by James S. Dooley, Anna S.F. Lok, Andrew K. Burroughs, E. Jenny Heathcote. © 2011 chap-10;page 210.
2. Marshall JB. Tuberculosis of gastrointestinal tract and peritoneum. Am J Gastroenterol 1993;88:989-99.
3. Brooks JR. Pancreatic ascites. In: Brooks JR, editor. Surgery of the pancreas. Philadelphia: WBSaunders; 1983, p. 230-2.
4. World Health Organization-Dengue and severe dengue, Fact sheet N117, November 2012, <http://www.who.int/mediacentre/factsheets/fs117/en/index.html>/acccsedon 7/7/2013.
5. Braunwald's Heart Disease, a textbook of cardiovascular medicine; chap 24 diagnosis and management of acute heart failure g. michael felker and john r. teerlink; page 491.