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ASCITIC AND PLEURAL FLUID BEING POSITIVE FOR ACID FAST BACILLI BY ZIEHL- NEELSEN STAIN : A RARE CASE REPORT.

Medicine

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ABSTRACT

The incidence of extrapulmonary tuberculosis is rising globally due to the increased prevalence of HIV infection. Hence a high clinical suspicion and supportive diagnostics is necessary for the diagnosis . The incidence of Acid fast bacilli being positive by ZN stain is very low, but in our patient who prented with easy fatigability, fever and abdominal distension of 5 months duration found to have both pleural and ascitic fluid positive for the organism.the patient was started with anti-tuberculosis treatment and is improving.

KEYWORDS

Acid fast bacilli, ZN stain, Extrapulmonary tuberculosis.

INTRODUCTION :

Tuberculosis is a disease which has affected mankind for many centuries. An early reference to probable intestinal tuberculosis was made in 1643 when the autopsy on Louis XIII showed ulcerative intestinal lesions associated with a large pulmonary cavity.John Hunter, described the microscopic tubercle" in the liver, the spleen, the uterus, the coats of the intestines, the peritoneum." He postulated that these tubercles probably arose from the lungs. This was followed by the description of a tubercle causing an ulcer in the mucous membrane of the intestine resulting in destruction of the wall and leading to intestinal phthisis[1]. Autopsies conducted on patients with pulmonary tuberculosis before the era of effective antitubercular drugs revealed intestinal involvement in 55-90 per cent cases, with the frequency related to the extent of pulmonary involvement. Abdominal tuberculosis continues to be common in various parts of the world with large series being reported from Chile, Egypt, India, Iraq, Kuwait, Nigeria, Saudi Arabia and Sudan.

CASE REPORT

55 year old female with complaints of low grade fever for 5 months with easy fatigability,abdominal distension, reduced appetite and significant weight loss . on examination patient had pallor, ascites and reduced breath sounds with dull note on percussion in the right infrascapular region .Investigations revealed pancytopenia, markedly raised ESR and normal renal and liver function tests. Ultrasonogram of the abdomen revealed goss acites and normal liver echotexture . Chest radiograph showed right sided pleural effusion .The pleural fluid and ascitic fluid was tapped and sent for analysis which included fluid protein, sugar, adenosine deaminase(ADA),culture and for ZN staining. The fluid analysis report revealed that both the samples were exudative. Both ascitic and pleural fluids were positive for acid-fast bacilli by ZN staining and negative for malignant cells. She has been started with antituberculosis treatment and one unit of packed red blood cell have been transfused with high protein diet. Patient is better on follow up and has is improving.

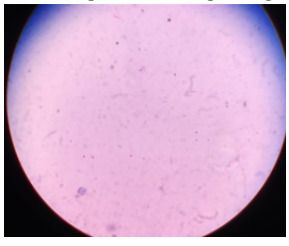

Fig 1: AFB in ascitic fluid

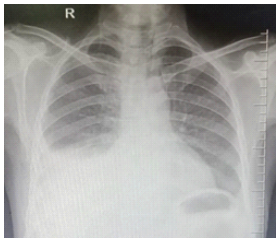

Fig 2: Chest radiograph

DISCUSSION :

Tuberculosis has been declared a global emergency by the World Health Organization and is the most important communicable disease worldwide. The prevalence of extra-pulmonary tuberculosis seems to be rising. In patients with extrapulmonary tuberculosis, abdomen is involved in 11% of patients[2] . Abdominal tuberculosis (TB) includes involvement of the gastrointestinal tract, peritoneum, lymph nodes, and/or solid organs [3]. Abdominal TB comprises around 5 percent of all cases of TB[4].. Risk factors for development of abdominal TB include cirrhosis, HIV infection, diabetes mellitus, underlying malignancy, treatment with anti-tumor necrosis factor (TNF) agents, and use of peritoneal dialysis [5,6] . The diagnosis of abdominal tuberculosis should be suspected in patients with relevant clinical manifestations (fever, weight loss, abdominal pain and/or distension, ascites, hepatomegaly, diarrhea, abdominal mass, abnormal liver function tests) as well as relevant epidemiologic factors (history of prior TB infection or disease, known or possible TB exposure, and/or past or present residence in or travel to an area where TB is endemic). The diagnosis of abdominal TB may be definitively established by demonstration of *M. tuberculosis* in peritoneal fluid (in the setting of ascites) or a biopsy specimen of an involved site (such as peritoneum, intestine, or liver) or via mycobacterial culture and/or nucleic acid amplification test (NAAT) [7]. The sensitivity of AFB smear and mycobacterial culture ascites fluid is low (less than 2 percent and less than 20 percent, respectively); broth culture results may be available in 2 to 3 weeks, and solid-phase culture results require several weeks [8,9,10]. abdominal tuberculosis is a mimicker of malignancy, particulary in the aged.hence thorough investigation to rule out the later is necessary befor starting anti tuberculous treatment.

CONCLUSION

The incidence of ZN staining being positive for acid-fast bacilli in the ascitic fluid is very low , and its incidence in both ascitic and pleural fluid in a given patient is extremely rare. Apart from clinical diagnosis, microbiological expertise is required in the the detection of the bacilli in body fluids and exclusion of internal malignancy before starting the treatment.

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