

Amoebic Splenic Abscess A Rare Case Report

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Article History	Abstract
Received: 06 June 2023 Revised: 05 Sept 2023 Accepted: 25 Nov 2023 CC License CC-BY-NC-SA 4.0	Primary splenic amoebic infections are rare and more commonly seen in immunocompromised patients. Though amoebic infection is common in tropical regions or areas having poor hygienic practices. It's the 3rd most common cause of parasitic death and has 15% prevalence in India. Review of literature has shown several species that cause splenic amoebiasis followed by Amoebiasis colitis due to feco-oral transmission. In this case, The entry of amoeba into the spleen may be explained by trauma due to the increased movement of fluid into the injured area. Once in splenic parenchyma, amoeba causes proteolytic destruction and abscess formation. Hence, it is important for pathologists to be aware of this histomorphologic appearance and diagnostic pitfalls when evaluating as its easily curable with the use of metronidazole. Peculiarity: Primary amoebic splenic abscess with colourless thickened pus showing E.coli positivity Keywords: Amoebic Splenic Abscess

1. Introduction

Amoebic splenic abscess is an extremely rare presentation, the incidence of splenic abscess is itself only less than 0.1 to 0.7%. Generally seen as a result of bacteremia, particularly in the setting of abnormality caused by trauma and hemoglobinopathy, or as the complication of infective endocarditis, HIV, malaria, tuberculosis, etc.

Case Details

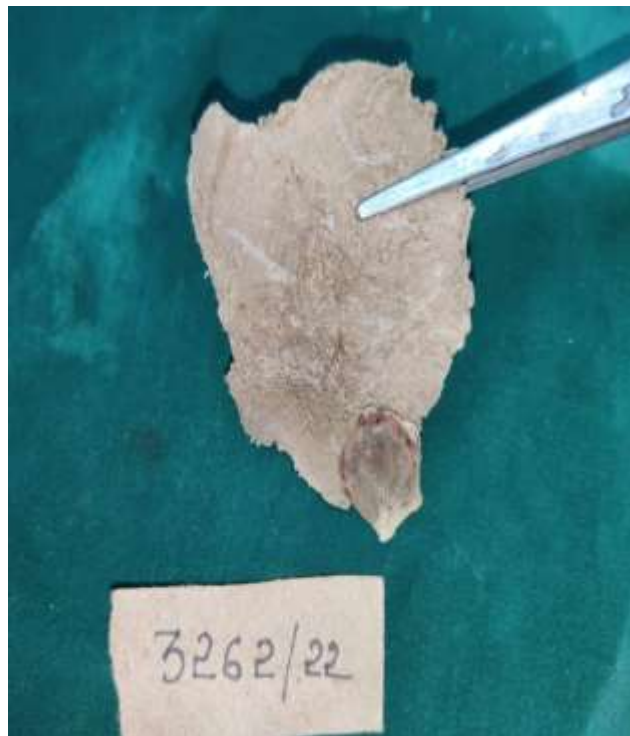
63 / M, compliance of Abdominal pain & Constipation, fever with a past history of abdominal bloating on the day of presentation. With a past history of trauma a year back, for which he didn't seek any medical care. He is a known case of diabetes mellitus and hypertension under medical management. Radiological finding: splenic abscess of 10.3x5.7 cm. Splenic abscess drainage: Foul smelling thickened pus and the Pus culture showed E. coli sensitive to Amoxicillin / clavulanic acid.

Histopathology

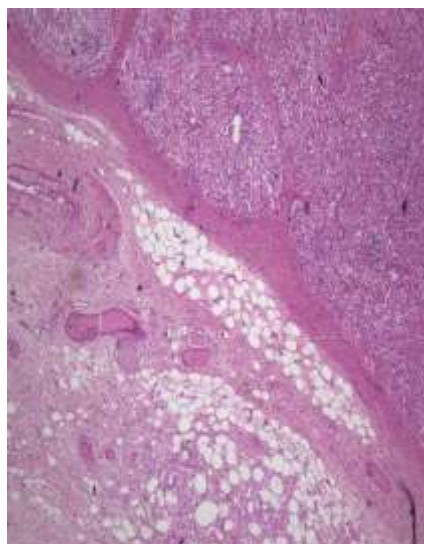
Gross

Received splenectomy specimen in four fragments, the largest fragment measuring 10x7x4cm and the smallest fragment measuring 3x2x1cm. The external surface of the largest fragment shows an attached pad of fat and is congested. Cut surface of the largest fragment is grey-brown, friable, congested with focal grey-white areas. And other fragments are grey-brown, friable with areas of necrosis.



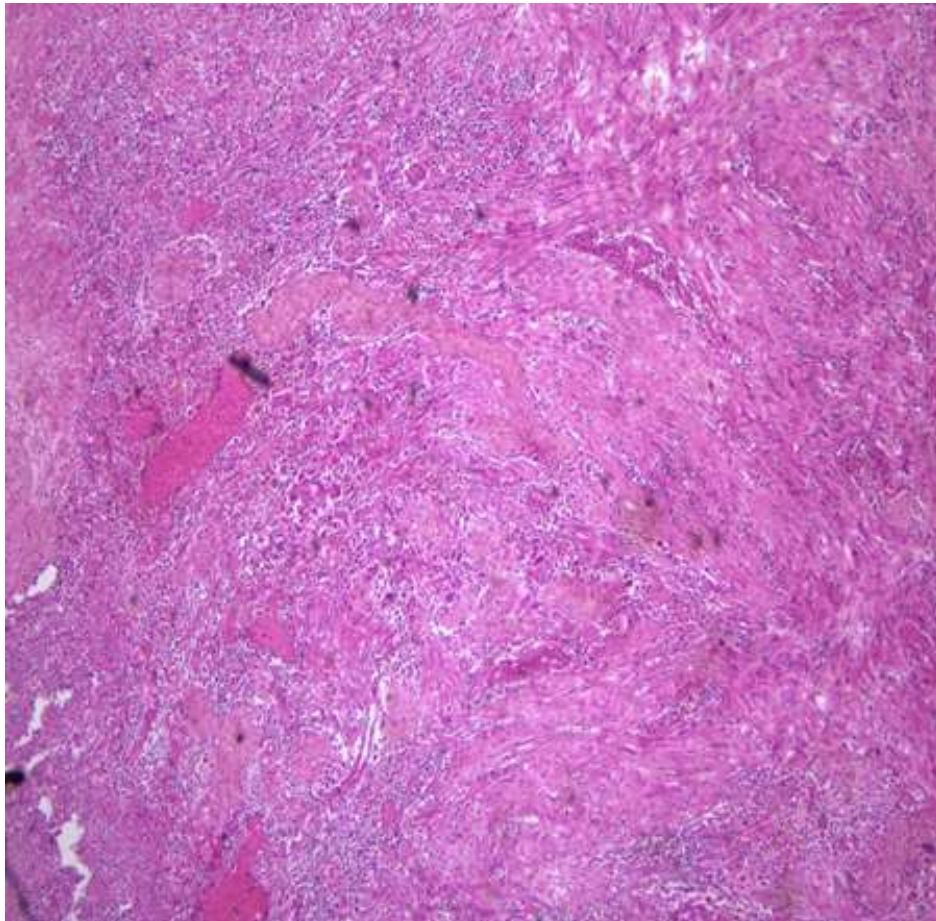


Microscopy



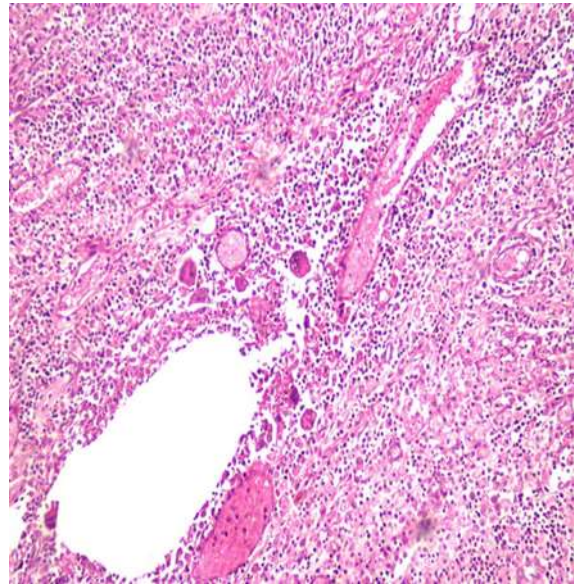
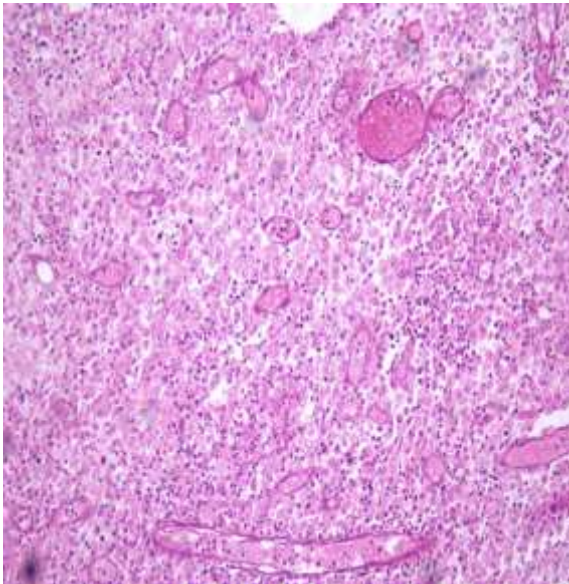
A: Spleen architecture

B: Diffuse red pulp and obliteration of white pulp (4x H&E)

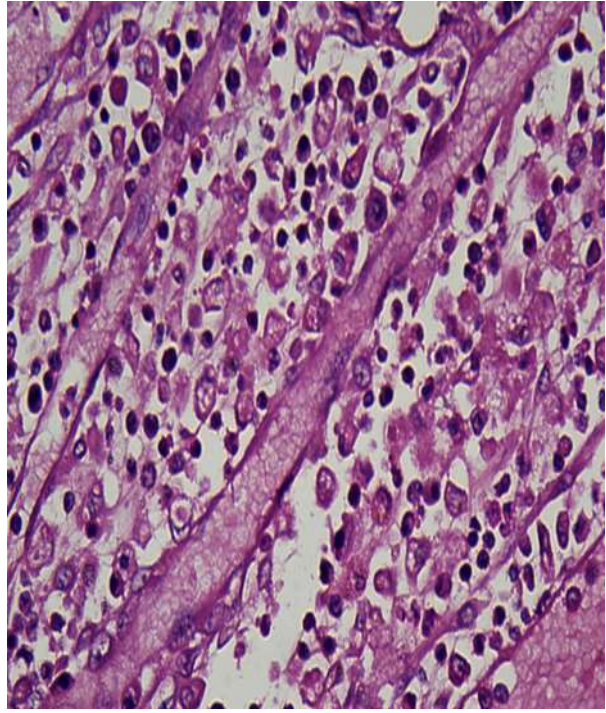
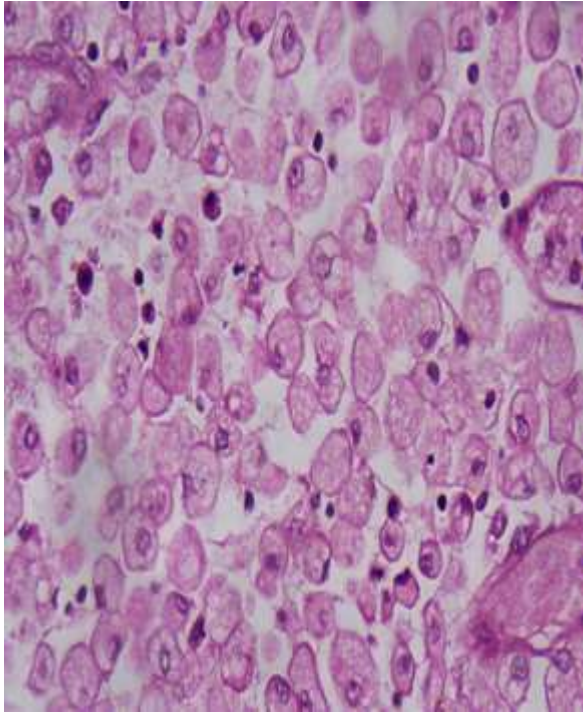


C: Fibrosis

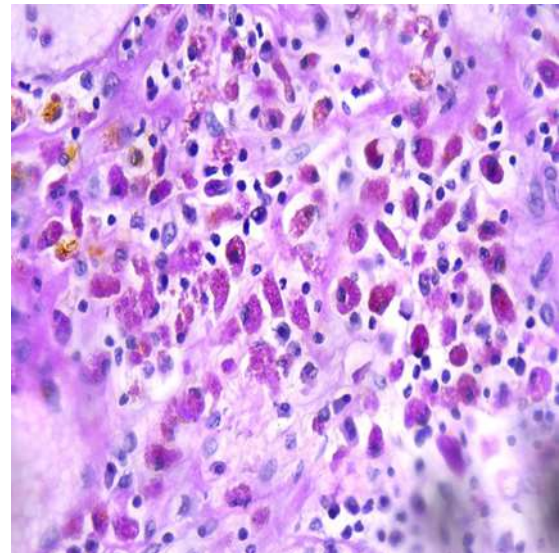
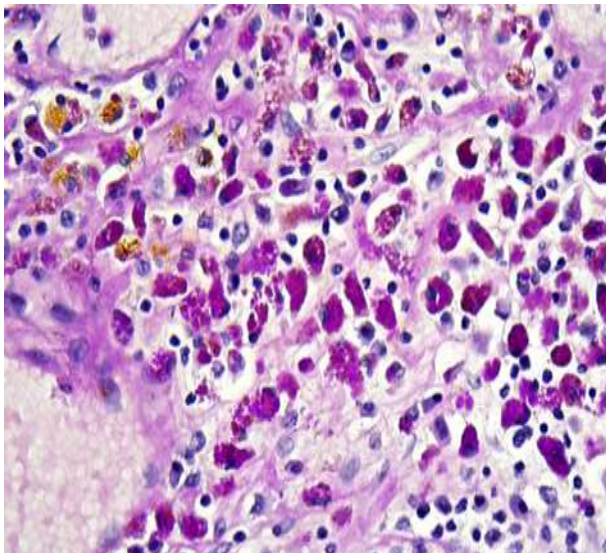
D: Necrosis (4x H&E)



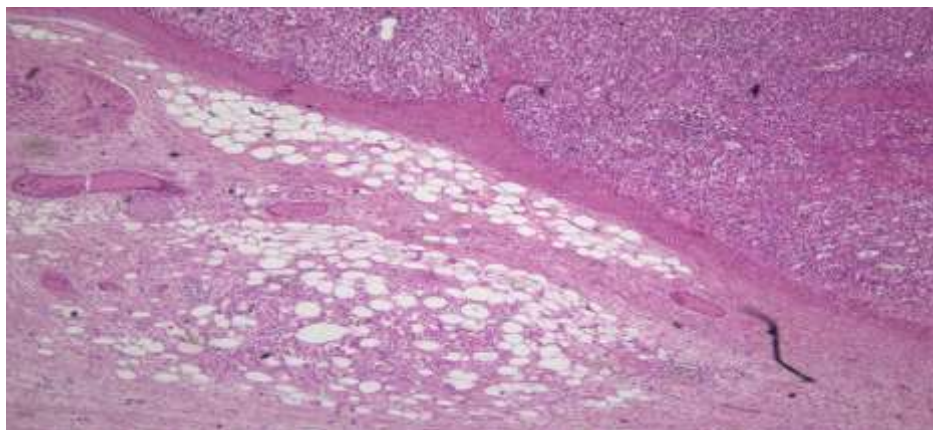
D&E: Inflammatory infiltrates, foamy macrophages, giant cells (10x H&E)



F&G: Foamy macrophages / Trophozoite forms of Amoeba (40x H&E)



H&I: PAS Positive trophoblastic forms of amoeba (40X)



J: Perisplenitis and panniculitis (4x H&E)

Histopathological examination

Sections studied from the spleen show extensive areas of necrosis and haemorrhage infiltrated by inflammatory cells consisting of neutrophils, lymphocytes, few plasma cells along with collections of foamy macrophages and giant cells. In the necrotic areas are also seen collections of oval to round

structures with indistinct nuclei (PAS stain intensely positive) suggestive of trophozoite forms of amoeba – probably *Entamoeba histolytica*. Also seen are blood vessels showing organised thrombi. There is evidence of perisplenitis and panniculitis in the peritoneum surrounding the spleen. No definite granuloma or fungal elements seen. We arrived at the diagnosis of Acute on Chronic Abscess with perisplenitis & focal collection of PAS positive organism resembling *Entamoeba histolytica* - **AMOEBIC SPLENIC ABSCESS.**

2. Results and Discussion

Entamoeba histolytica Histo means tissue and lysis means destruction. A unicellular organism with a single nucleus protozoa. Globally distributed (2- 60% prevalence). Common in a tropical region or in areas having poor hygienic practices. 3rd most common cause of parasitic death. 15% prevalence in India. Faeco-oral route of transmission. All age groups can be affected, commonly seen in a homosexual man The histolysin secreted by amoebiasis, causes destruction and necrosis of the splenic tissue and thereby helping the parasite obtain nourishment through absorption of these dissolved juices. The dissolved juices or is not of suppuration but is a mixture of sloughed degenerate tissue and blood, which is usually brown in colour and thick in consistency, therefore called as anchovy sauce pus. The fluid cytology would reveal RBC, occasional leukocytes, trophozoites can't be usually seen in the pus. Since, the central necrotic area usually contains cytolysis granular material with no amoebae. The peripheral zone is where the amoeba multiplies, invading the adjoining healthy liver tissue. The pus is bacteriologically sterile. But, in our case the pus showed *E.coli* growth, due to the superimposed parasitic infection or which might have been the primary cause too, driving the *E.histolytica* towards the spleen following the trauma. In this case, The entry of amoeba into the spleen may be explained by trauma due to the increased movement of fluid into the injured area. Once in the splenic parenchyma, amoeba may have caused proteolytic destruction and abscess formation.

Peculiarity

Complete blood count: eosinophils were normal Location: spleen (most common site is liver) Fluid nature: colourless thickened pus (not an anchovy sauce) Pus culture: positive for *E.coli*.

3. Conclusion

In this patient, *Entamoeba Histolytica* is the cause of the splenic abscess. The entry of amoeba into the spleen may be explained by trauma due to the increased movement of fluid into the injured area. Once in the splenic parenchyma, amoeba may have caused the proteolytic and destruction and abscess formation.

References:

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