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CASE REPORT

KAWASAKI DISEASE PRESENTING WITH LIVER ABSCESS IN A 2.5YR OLD BOY- A RARE CASE REPORT AND REVIEW OF LITERATURE

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ABSTRACT

Kawasaki disease is a self-limiting vasculitis mainly affecting small and medium sized vessel. It mostly affects children less than 5 years of age and has genetic predisposition. Genetically susceptible individuals exposed to environmental trigger may develop Kawasaki disease. Clinical presentations are fever, polymorphous rashes along the trunk, strawberry tongue, swollen lymph nodes around neck, a rash in the genitals area, lips, palms, or soles of the feet, and red eyes. serious complications of KD include coronary artery dilatations and aneurysms and is leading cause of acquired heart disease. Prompt recognition of disease and early initiation of treatment with IVIG results in significant reduction in the occurrence of CAA. KD should be considered in the differential diagnosis of all febrile illnesses in young children where fever persists for more than 5-7 days.

KEYWORDS: Liver Abscess, IVIG, Echocardiography, Coronary Artery Dilatation.

INTRODUCTION

Kawasaki Disease is an acute inflammatory vasculitis of small- and medium-sized arterial vessels which can weaken coronary artery and cause aneurysm formation in approximately 25% of cases which are untreated, with increased risks of cardiovascular complications and increased mortality [1]. The most common age group affected is between 6 months to 5 years [2]. Diagnosis of Kawasaki disease is difficult and late diagnosis leads to increase coronary complications, early suspicion of the disease is needed, and supplemental information can be used to assist the diagnosis when classical criteria are insufficient [3]

CASE REPORT

Here we present the case of 2.5-year-old male child who presented with the complaints of fever for 7 days and abdominal pain. Patient was admitted and kept under observation during which he received intravenous antibiotics for 2 days. There is no previous significant medical history of trauma and chronic illness, systemic examination was normal. On examination patient was conscious, cooperative and well oriented to time, place and person.

During admission investigations were done which showed a total WBC count of 21080/mm3 with differential count showing 84% neutrophils, 8%lymphocytes, high platelet count (538000/mm3), high CRP (343.3ng/l), high ESR (71mm/hr), high procalcitonin (6.05ng/l), high APTT (38.8sec), high PT (17.2sec), hypoalbuminemia(1.8g/dl). USG pelvis and abdomen showed moderately enlarged liver, round to oval irregularly thick-walled cystic lesion of 103cc measuring about 7.0*4.9*5.6, in right lobe of liver, central liquified component of 26cc measured 4.7*2.3*4.5cm, edematous changes surrounding hepatic parenchyma was present. At the porta few enlarged, benign configuration oval shaped lymph nodes largest measuring about 16*9mm suggested of liver abscess.

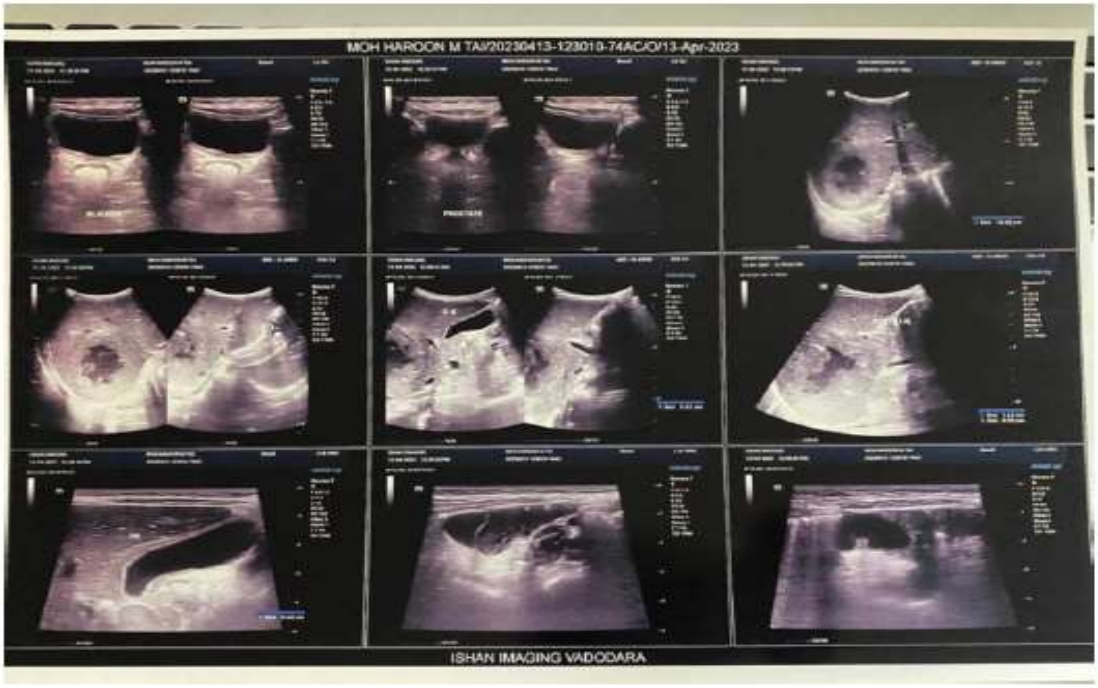

FIGURE - 1

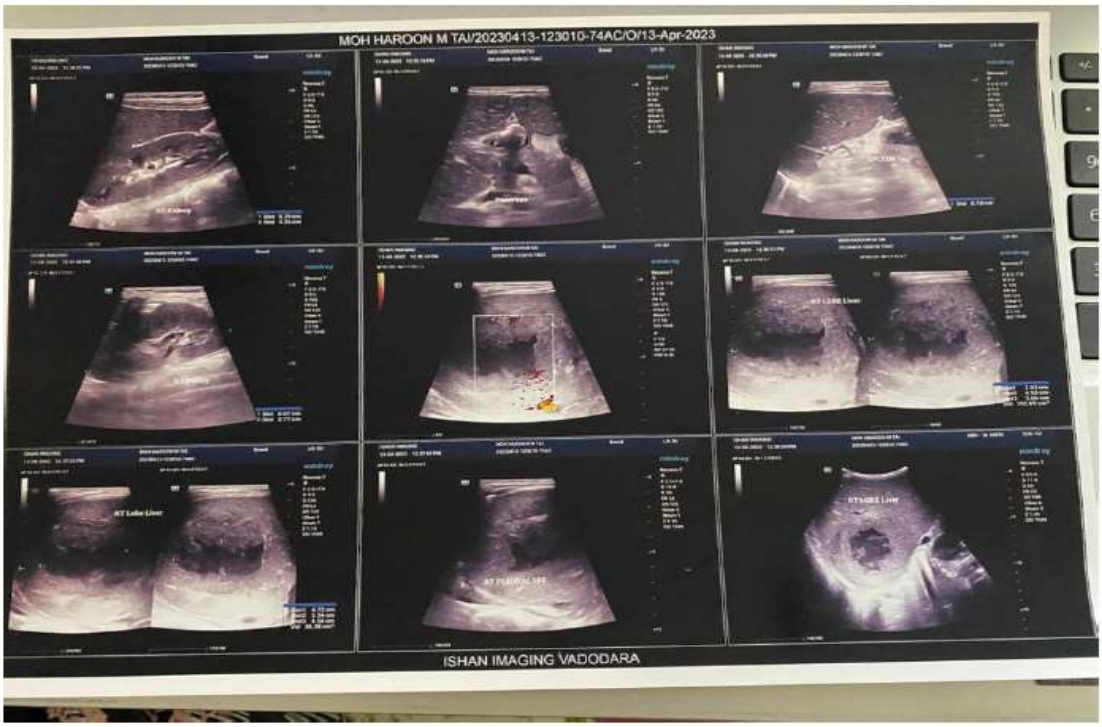

FIGURE - 2

Figure 1 and 2 shows round to oval irregularly thick-walled cystic lesion of 103cc measuring 7.0*4.9*5.6cm with central liquified component of 26cc measuring 4.7*2.3*4.5cm in right lobe of liver.

Indirect hemagglutination (IHA) test for IgG amoeba antibody was positive, biopsy and aspiration of abscess was done which showed degenerated amoebic cells, no malignancy, parasites or granuloma, CGD was ruled out, brucellosis titre was negative. Intravenous antibiotic meropenem and vancomycin were started and abscess was drained with intrahepatic drain kept in situ. FFP and PCV transfusion was done. Multiple episodes of bradycardia and desaturation indicated hypocalcemia on blood investigations which was corrected with intravenous calcium gluconate and vitamin D3. Chest CT in view of respiratory distress showed right pleural effusion, ICD was inserted and was kept on high flow nasal cannula oxygen supplementation.

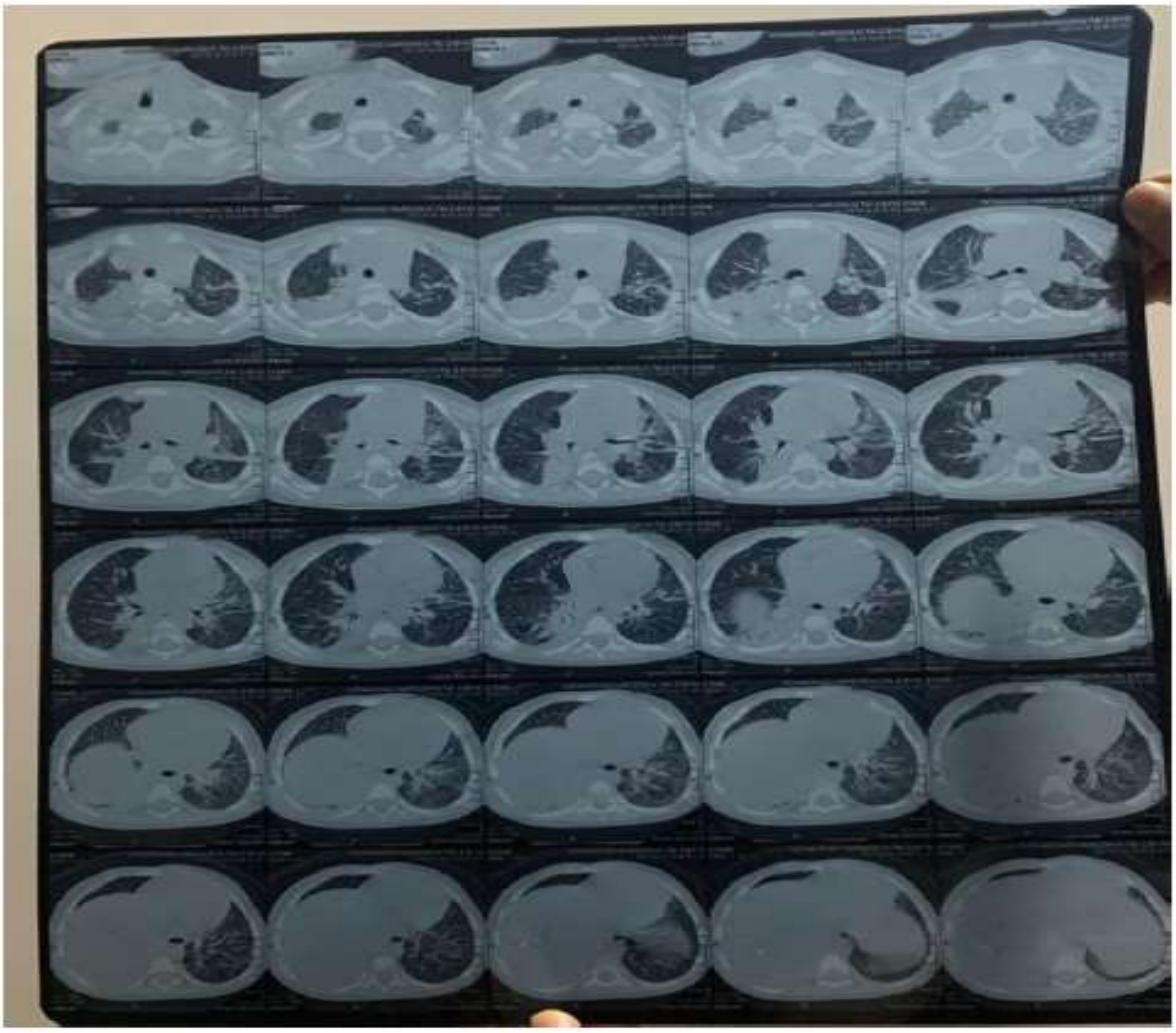

FIGURE - 3 Chest CT Shows Right Pleural Effusion

With a suspicion of incomplete Kawasaki disease due to developing rash and perianal excoriation, a transthoracic 2D echo was done which showed coronary artery dilation in left main coronary artery (LMCA) and its branches:

Left main coronary artery (LMCA) = 2.8mm (Z score= 2.26)
Left anterior descending ((LAD) = 2.3mm (Z score=2.30)
Left circumflex artery (LCx) = 2.3mm (Z score= 2.31)
Right coronary artery (RCA) = 2.0mm (Z score = 0.74)

IVIG 2gm/kg was started after 2 afebrile days there was another spike of fever and CRP started rising again for which repeat blood, urine and pus culture from abscess were taken which came back negative, there was no microbiological evidence of TB in all these specimens. So, it was concluded fever was due to ongoing inflammation of KD thus, same line of treatment with IVIG was continued following which the fever responded and the inflammatory markers improved.

Outcome and follow up

Fever pattern improved dramatically. Total WBC count dropped to 9130/mm3, CRP reduced to 69.9mg/l, platelet count dropped down to 70000/mm3 and child was discharged.

DISCUSSION

KD can be triggered by Multiple infectious agents which includes viruses, bacteria, rickettsiae and even candidal agents [4]. very few cases (about 24%) meet 4 out of the 5 classical clinical criteria of KD which includes changes in lips and oral cavity, polymorphous exanthem, bilateral non-exudative bulbar conjunctivitis, changes in extremities and cervical lymphadenopathy over 1.5 cm in size thus diagnosis of KD in infants 3 months of age or younger becomes difficult. [5]. First line in the treatment of KD is administration of IVIG and aspirin [1]. in order to reduce cardiac complications]. early diagnosis and administration of IVIG within 10 days, or ideally before day 7 of the disease, is crucial. Aspirin in the acute inflammatory period is prescribed at either 80–100 mg/kg/day or 30–50 mg/kg/day. Forty-eight to seventy-two hours after cessation of fever, aspirin should be decreased to a low dose (3 to 5 mg/kg/day). Since diagnosing KD in infants younger than 6 months is difficult, infant with any febrile illness for 7 days or more without any other explanations or clinical features of KD, should receive blood analysis of systemic vascular response. Echocardiography should be performed If the ESR or CRP is elevated. We describe the presence of KD with amoebic hepatitis through this report. In this child, a lack of clinical response along with a evolution of clinical signs suggestive of KD led us to confirm the diagnosis with 2 D echocardiogram. But the child had only a partial response to first course of IVIG hence repeat course was given after thorough investigations. with drainage of the abscess and addition of amoebicidal complete resolution was achieved. Increased acute phase markers and hypoalbuminemia in the child was suggestive of severe inflammation. Serological test (IHA) confirmed the diagnosis of amoebic hepatitis. A proven presence of an infection should not rule out the possibility of a co-existing inflammatory condition like KD, even if the response to therapy is inadequate. Whether amebiasis was a coexisting infection with inflammation (KD) causing a subclinical response or the potential organism triggering the development of KD is debatable. However, the theory regarding the possible role of microorganisms with a disordered innate immune system as a possible etiology for KD is strengthened by these cases. While dealing with inadequate response to any infection, possibility of underlying inflammatory conditions like KD should be ruled out in clinically suggestive situations.

CONCLUSION

This case of a 2.5-year-old male presenting with fever, abdominal pain and deranged blood investigations, showed presence of liver abscess on USG, few days later started developing rash and perianal excoriations, and 2D ECHO showing coronary artery dilation confirmed incomplete Kawasaki disease as all the clinical criteria weren't fulfilled. It was treated with IVIG and broad-spectrum antibiotics and condition of the patient improved.

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