

Life-threatening Child Abuse: Penetrating Injury of Abdomen with Sewing Needles

Until the publication of Kempe, *et al.* [1] paper in 1962, child abuse was an under-recognized and under-reported entity. Now, more than half a century later, there is clear evidence that child abuse, also known as non-accidental trauma (NAT), is a global problem.

A 14-month-old girl weighing 5 kg was brought to the casualty services of our hospital by her mother with complaints of pain in the abdomen and persistent crying. The mother informed the physicians of her suspicion of rodent-bite while she was away doing household chores. A careful examination revealed a single pin-head sized puncture mark in the epigastric region. A sharp tip of a single foreign body was palpable just below the puncture mark. There were no external injuries over rest of the abdomen. A plain abdominal radiograph showed three linear foreign bodies (*Fig. 1a*). On lateral films, the objects appeared to be intra-abdominal, traversing more than half of the depth of the abdomen (*Fig. 1b*). It then became clear that all three linear objects were inserted one after the other, through a single puncture site in epigastrium. A medicolegal case was registered. An exploratory laparotomy was undertaken and the first foreign body, identified as rusted sewing needle, was retrieved from the sub-hepatic region, entangled within the omentum. The other two, which were embedded deep within the liver parenchyma with just the tips on liver surface, were retrieved through a separate incision. Rest of the solid organs and bowel were normal. Postoperative period was uneventful and patient was discharged after completing medicolegal procedures.

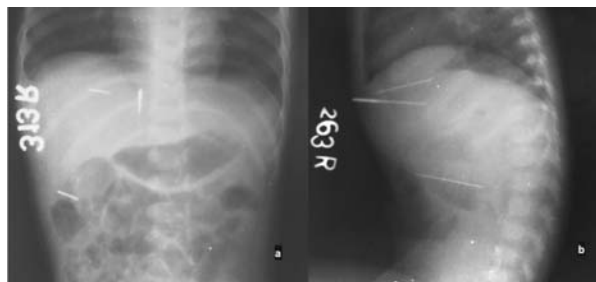


FIG. 1 Plain abdominal antero-posterior (a) and lateral (b) abdominal radiograph showing needles in abdominal cavity.

Although it is generally believed that child abuse is mainly a social issue, with heavy involvement of social workers and child protective services, these children often need to be primarily treated as trauma cases, as a large proportion of them have severe and life-threatening injuries [2]. Not only do they need complete evaluation of the presenting acute injury, but also the subtle underlying sub-acute and chronic injuries, which may increase the morbidity during their treatment. As often the injuries may be life threatening and hidden, it requires high degree of suspicion and timely intervention. Out-of-the-box thinking is required in order to tackle a peculiar clinical situation.

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Hepatitis A with Superadded *Salmonella paratyphi A* Infection Presenting with Exudative Pleural Effusion and Acalculous Cholecystitis

Both hepatitis A and enteric fever are major public health problems in developing countries [1,2]. Transudative pleural effusion and ascites have been reported in hepatitis A but rare in enteric fever [3-5].

A 4-year-old girl presented to us with fever for 15 days along with jaundice, cough and dyspnea. Since day-8 of fever, child had multiple petechial rashes all over the body. There was no history of blood transfusion, intravenous drug use, tick bite, or contact with tuberculosis. There was no history of MMR, Hepatitis A, Hepatitis B or Typhoid vaccination. Chest examination revealed stony dull percussion note anteriorly over right side of chest starting from 2nd intercostal space downwards in mid clavicular line with absent breath sounds. Abdomen was distended, and there was tender hepatomegaly and mild splenomegaly. Other system examination was normal.

Investigation showed anemia (Hb 8.3 g/dL), elevated C-reactive protein (36.1 mg/L), and deranged liver function tests (total bilirubin 5.6 mg/dL, direct bilirubin 5.5 mg/dL, alanine aminotransferase 366 U/L, aspartate aminotransferase 256 U/L, gamma glutamyl transferase-359 U/L, Alkaline phosphatase 787 U/L); child also had coagulopathy (INR = 1.92).

Chest radiograph revealed opacity involving lower and middle zone of right lung with a sharp convex upper border without mediastinal shift. MRI of chest and abdomen (**Fig. 1**) showed massive pleural effusion with collapsed lobes of right lung, hepatosplenomegaly and hyperintense gall bladder with thickened wall suggestive of acalculous cholecystitis. IgM for Hepatitis A was reactive. Tests for other hepatotropic organisms and tuberculosis yielded negative results. Intravenous vitamin K was administered. A diagnostic pleurocentesis revealed exudative pleural effusion; culture did not reveal any growth. Widal test was positive ((T(O) 1:160, A(H)-1:320)) and blood culture demonstrated *Salmonella paratyphi* A. Intravenous cefotaxime (200 mg/kg/day) was administered, and after 3 days, the patient became afebrile; distress also decreased considerably and before discharge, repeat LFT showed improvement. Child was discharged with oral cefixime (20 mg/kg/day). Chest X-ray showed clearance of fluid during one week follow-up. The patient was doing well after a follow-up of two months.

Exudative pleural effusion in viral hepatitis should be investigated to rule out other coinfections.

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FIG.1 Magnetic resonance imaging coronal view showing massive right sided pleural effusion and hyperintensity in gall bladder area with thickened wall (arrow) indicative of acalculous cholecystitis.

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