Liver Abscess with Actinomycosis in a Child Presenting as a Subcutaneous Mass

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A 9-year-old boy suffered for several days from a painful mass on the right side of his back. Abdominal ultrasound showed a hypoechoic mass in segment 6 of the liver. Computed tomography revealed a 4 × 7 cm, poorly defined ruptured hepatic tumor. Laboratory findings revealed leukocytosis in the absence of a left shift and mild anemia. During the laparotomy, a liver abscess with surrounding fibrosis was found. The pathological report showed that the liver abscess was caused by actinomycosis. The boy recovered without complications and was discharged on the 9th postoperative day. He received oral antibiotics for 3 months after the operation. A liver abscess with actinomycosis is rare, especially in children. To our knowledge this is the first report on this disease in the form of a subcutaneous mass. We report this case and review the literature.

Key words: liver abscess, actinomycosis, subcutaneous mass

Actinomycosis is rare and usually caused by Actinomyces israelii, a gram-negative anaerobic filamentous bacterium. Actinomyces israelii is a normal flora of the oropharynx, gastrointestinal tract, and female genital tract. Although most manifestations occur in the cervicofacial area, it is occasionally found in the abdomen.1,2 Typically, abdominal actinomycosis occurs after trauma, perforation of the gut, or an operation of the gastrointestinal tract.3 The lesion most commonly involves the ileocecal region, followed by the colon, stomach, and liver.3

The case of hepatic actinomycosis we discuss here is unique because it was manifested as a subcutaneous mass that was continuous with the liver abscess in a boy.

Case Report

A 9-year-old boy experiencing pain for several days was brought to hospital with a mass on the right side of his back. His past history was normal with the exception of having undergone an appendectomy 9 months earlier. No fever or previous trauma was noted. Physical examination revealed a non-movable and non-erythematous 4 × 2 cm tender mass on the right lower back (Fig 1). An ultrasound showed a 4.8 × 2.1 cm hypoechoic mass located in segment 6 of the liver (Fig 2). After admission, abdominal computed tomography depicted a 4 × 7 cm, poorly defined ruptured hepatic tumor in the posterior segment of the right hepatic lobe (Fig 3). This tumor extended toward the inner aspect of the ribs and formed a protruding mass. Laboratory analysis revealed the following data: white cell count 16300/µL (neutrophils, 65.6%; lymphocytes, 22.2%; eosinophils, 2%; monocytes, 9.1%), hemoglobin 10.5 g/dL and platelets 854 × 10³ /µL. A laparotomy was performed because the radiologist suspected that the tumor had ruptured. During surgery, a liver abscess with surrounding fibrosis was found in segment 6 and protruded toward the inner aspect of the thoracic cavity.