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Case report: a gossypiboma in the shoulder

Received: 7 November 2005 / Accepted: 25 January 2006 / Published online: 4 May 2006
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Abstract We present the case of a 15-year-old boy who underwent shoulder surgery for repair of a Bankart lesion after dislocation of his right shoulder. A compress was left in the surgical wound. This case is presented to highlight an important pitfall in the diagnosis of gossypiboma (foreign body reaction): when the wires of a compress are visualized on X-ray, beware of the fact that it is possibly located inside the body. The diagnosis of an abscess was made by ultrasound. The compress wires were visualized on radiographs.

Keywords Gossypiboma · Ultrasound

Case report

A 15-year-old boy was admitted to the hospital with an anterior dislocation of the right shoulder. Initially, the dislocation was treated conservatively by closed reduction and immobilization. An arthro-CT was performed and showed a bony Bankart lesion. The labrum was reattached surgically using Mitek anchors (Bankart repair).

At follow-up examination 3 weeks after surgery (Fig. 1), the patient was not free of complaints. There was a focal inflammation around the scar. He complained of local irritation of the subcutaneous suture material with discharge of citric fluid.

Radiographs of the shoulder showed a normal position of the humeral head in relation to the glenoid and a normal position of the Mitek anchors. The radiograph also revealed the radio opaque marker of a compress in the right axillary region (Fig. 2). This compress was assumed to be located extracorporally.

Eighteen months after surgery, the patient consulted the trauma surgeon because of a nodular mass in the right armpit. On ultrasonography, the mass corresponded to an abscess formation in the axilla. Radiographs once again revealed the metal marker in the compress in the same location as the original follow-up radiographs did.

Surgery was performed, which revealed a retained surgical compress in the right armpit. Then the patient was discharged the same day and made an uneventful recovery.

Discussion

The term gossypiboma means retained surgical sponge and is derived from the Latin word “gossipium,” meaning cotton, and the Kiswahili word “boma,” meaning place of concealment. It is a surgically introduced soft tissue structure concealed within the body [1]. This rather uncommon surgical complication can occur after any surgical procedure, which requires the use of internal swabs. The condition is not that infrequent in the field of thoracic or abdominal surgery where it has an estimated incidence of 1/1,500 [2]. However, gossypibomas located in the extremity are extremely rare. Several cases of gossypibomas in the leg or the knee were reported [3–5]. To the best of our knowledge, a gossypiboma in the shoulder was never reported before.

Some patients may remain asymptomatic for several months or even years, while others develop early persistent infected discharge through the surgical wound or even septic conditions [6].

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Fig. 1 Antero-posterior radiograph 3 weeks after surgery. A curved linear metal opacity is seen in the right axilla (*arrows*). Note the normal position of the anchors after Bankart repair

The most impressive imaging of gossypibomas is the curved or banded radio opaque lines on plain radiography, which represent the radio opaque markers of the surgical swabs. It may also present as a heterogeneous ill-defined mass with gas bubbles within a fibrotic capsule. On ultrasound, a gossypiboma appears like a cystic mass with

highly irregular internal echoes. A denser zone in this collection is due to the metal wire in the compress. A hypoechoic mass with complex echogenic foci can also be seen [7] (Fig. 3).

This case is presented to highlight the fact that a gossypiboma should always be included in the differential diagnosis of patients who have vague symptoms and who have had previous surgery. Persistent wound infection, unexplained pain, and fever in the postoperative period should lead one to suspect a retained foreign body.

Plain radiographs can easily diagnose such accidental retention of surgical sponges when a radio opaque marker was incorporated into the gauze. Radiographs are often an initial examination. It usually reveals a retained metallic density. Ultrasound can also be used to detect a gossypiboma [8]. Ultrasound-illustrated abscess formation and sometimes the metallic wire can be detected in the compress.

In this specific case, an X-ray of the shoulder was taken 3 weeks after surgery. The diagnosis of gossypiboma was missed because of the fact that we assumed that the compress was located on instead of in the axilla. This is an important pitfall. Therefore, it is important to search for a retained compress when a metal wire is detected on radiographs before the patient presents with an abscess.

Fig. 2 Antero-posterior (AP) radiograph (**a**) and modified axial view (**b**) of the shoulder performed 18 months after surgery. **a** On the AP view, once again, the metal wire (*long arrows*) in the compress located in the right axilla is demonstrated. **b** On the modified axial view, the metal wire (*short arrows*) is located in an anterior position

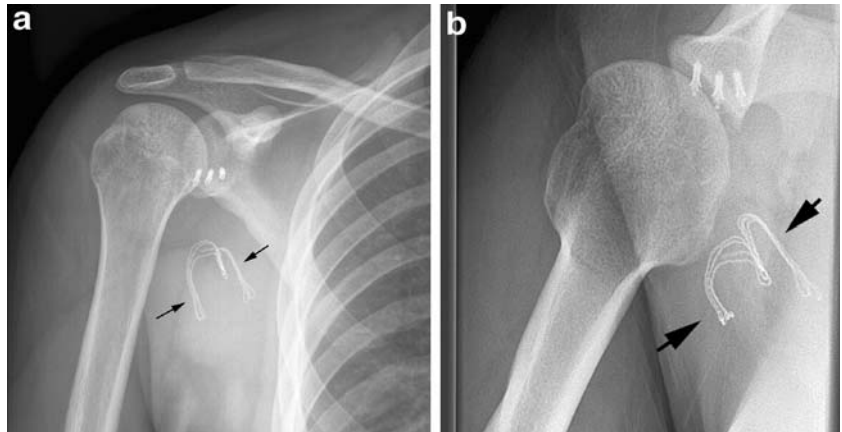
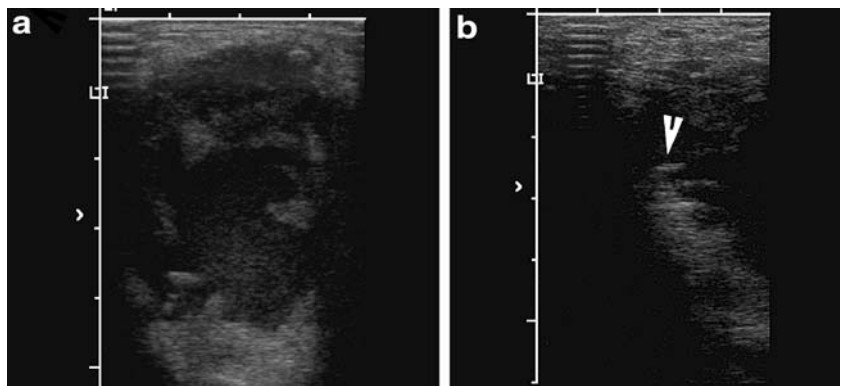


Fig. 3 Ultrasound of the axillary mass. **a** A thick-walled irregular mass lesion filled with echogenic material. **b** In the mass lesion, the metallic wire can be seen (*arrowhead*)



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