

Gossypiboma in Thigh- A Case Report

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What to Learn from this Article?

Presentation and Prevention of Gossypibomas.

Abstract

Introduction: The word Gossypiboma has been used for a retained surgical sponge/swab and is derived from gossypium (Latin: cotton) and boma (Swahili: place of concealment). Other synonyms for this entity are textiloma, retained textile foreign body (RTFB) / muslinoma. It is rare in musculo-skeletal surgery.

Case Report: An eighteen year old boy was operated upon for failed plating of right femur. He had a globular swelling in mid thigh. There were no discharging sinuses, no signs / symptoms of infection. While operating on him to remove the failed implant and fix the fracture, while following standard procedures, we found a full size sponge embedded in the fracture site.

Conclusion: In all cases presenting with an incidental mass with/without sinus, Gossypiboma be kept in the differential diagnosis. Awareness of the condition is a must to diagnose such a rare condition. While operating one should make sure that no sponge is left inside-which can have serious medicolegal consequences.

Keywords: textiloma ; gossypiboma ; osteoarticular surgery ; femur ; retained sponges.

Introduction

In 1884, Wilson [1] described the case of a retained foreign body after a laparotomy. Since then, many authors have reported their experiences with forgotten surgical sponges [2,3,4,5,6,7,8,9,10,11,12,13,14,15,16]. The true incidence and prevalence of the gossypiboma cannot be determined precisely because of low rate of reporting (because of its medicolegal implications). Its frequency is reported between 1/1000 and 1/32672 operations [4,13]. This pathology is mainly encountered after abdominal surgery (In about 75% of the cases) [13]. Textilomas after bone and soft tissue surgery are rare [5]. Some cases have been reported with forgotten

sponges in surgical sites at the level of pelvis, hip, thigh and knee joint [8]. Some cases have also been reported after posterior spine surgery [6]. But no fatal complications have been reported in musculoskeletal sites [12]. Diagnosis is variable: from a loud post operative evolution, with fever, suppuration of wound, fistula track, spontaneous erosion into various hollow organs with history of surgery [13]. Reactive changes can, sometimes, mimic a bone / soft tissue malignancy [3,4,8]. There may be a long asymptomatic period [13].

Surgeon must be aware of this condition, should consciously prevent occurrence of such a thing. If this happens, it is of grave

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Author's Photo Gallery



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Figure 1: Pre-operative x-ray of Gossypiboma in thigh. Fig shows failed implant. Some calcification is seen in soft tissues but it was thought to be a part of healing process.



Figure 2: Shows the sponge being extricated from between the bone fragments- A per-operative photograph.

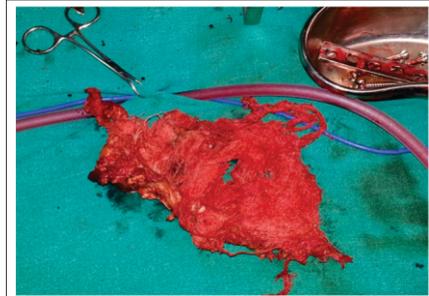


Figure 3: Photo of sponge recovered from the case.

medicolegal importance to the surgeon, his reputation and of the institution he is working for. We, herewith, report a case of forgotten sponge during a femur plating surgery, recovered two years post second surgery.

Case Report

An eighteen year old male presented with a failed plating of femur. He had a globular swelling over middle of right thigh. The local temperature was not raised and there were no prominent blood vessels. There were no discharging sinuses. He did not report any fever. He was operated upon for fracture shaft femur about four years back and the fracture was fixed using plate and screws at a peripheral hospital. One year later, he fell and had peri-prosthetic fracture. He was taken to the same surgeon at the same hospital where the fracture was re-fixed using plate and screws. Two years, post second surgery, he reported to this hospital in February 2013 with complaints of inability to bear weight on the right lower limb with the above findings. Radiographs showed failed implant. There was some calcification in soft tissues which was thought to be a part of fracture healing process (Fig.1).

In operation room, while attempting to freshen bone ends after removal of failed implant, a big gauze piece (sponge) was found in between the fragments (Fig.2). The sponge could be extricated in full with great patience without damaging any of the vital structures (Fig. 3). Some tissues had grown into it. The fracture was appropriately treated and fixed with interlocking nail and cancellous bone grafting (Fig.4).

Discussion

A gossypiboma is an iatrogenic mass lesion caused by a forgotten sponge in the body. It may remain asymptomatic/result in abscess development [8,13] which may burst leading to sinus formation. It was silent in this case even after it had been there for over two years. No history of fever was forthcoming. It was a per-operative diagnosis as it usually is. Clinical diagnosis was initially invoked in only 35% of 117 cases reported from literature [16]. Radiographs may show gauze/sponge if it had any radio opaque markings in it [10]. In this case there was none. It may also show as a soft tissue shadow or if calcified may show a whorl like pattern [10]. In our case some calcification in soft tissues was there but it was thought to be a part of attempts at union of fracture site.

MRI, which can show textile piece in situ [17], was not possible in this case because of the presence of implant. Moreover, it could be ordered only if we had a suspicion. Ours was a per-operative diagnosis.

Gossypiboma as a complication can occur in all forms of surgery, but it is rarely reported because of medicolegal

implications. Only 6% of textilomas are reported after musculoskeletal [5] /spine surgery [6] when compared to abdominal surgery (abdomen and pelvis combined is 75%) [13]. No fatal complications have been noted in musculoskeletal sites [12].

Best way to prevent gossypibomas is simple gauze counting. Eleven cases of retained sponges are reported in one series where eight had presumed incorrect sponge count [14]. Sponges with radioopaque markers can be used to identify them postoperatively and avoid later problems. But the morbidity will still occur in the form of a second surgery to remove it. Human errors cannot be completely abolished. One of the known causes is when patient is critical, bleeding on OT table and surgeon is in a hurry to control bleeding and bring patient out of OT. Another reason is high work pressure and late night emergency surgical procedure where surgeon is tired.

However, there can be no excuse for lapse and if there were a court case surgeon (alone) is wholly responsible for this lapse. It is an avoidable problem and awards have been given against doctors [18,19].

Conclusion

Its incidence can certainly be reduced by strict training schedules, like using only sponges with radio opaque markers, sponge counting, per-operative radiographs to confirm that none was left inside. But, these images, taken with image intensifier in operation room, are mostly of sub optimal quality and are of no help. Another suggestion could be research focused on inert and absorbable sponges soliciting little inflammatory reaction could help eradicate the problem. While awaiting future improvements, the most important thing to do is not to forget to consider a textiloma in the differential diagnosis of a previously operated patient presenting an incidental mass. But in orthopaedics, discharging sinuses (which are there after any infection) can not, always, be indicative of a retained textile foreign body. However, pre-operative diagnosis of Gossypiboma can be made with high degree of suspicion alone.



Figure 4: X-ray Photograph showing one month after surgery on first follow up visit.

Clinical Message

One must ensure that no sponges are left inside because it is of great medico-legal/consumer court significance. Orthopaedic surgeons should keep Gossypiboma in differential diagnosis of any case presenting with an incidental mass with/without discharging sinuses. Though rare, Gossypibomas do occur in musculo-skeletal surgery.

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