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Paraspinal Gossypiboma (Textiloma) Mimicking a Soft Tissue Tumor

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Abstract

Paraspinal textilomas are dreaded complications of spinal surgery and rarely reported in view of the medico-legal problems they may create. As many of them are asymptomatic and most are unreported, their true incidence is unknown. They must be kept in mind when re-operating for any mass lesion seen on magnetic resonance imaging in the vicinity of a previously operated spine. We present the case of a 40-year-old man found to have a textiloma as a result of a previous surgery, describe his imaging and histological findings, discuss the causes that might lead to the same, and enumerate preventive strategies to avoid such a complication.

Keywords

- paraspinal gossypiboma
- textiloma
- complication
- spinal surgery
- retained foreign body

Introduction

The term gossypiboma originates from (latin "gossipium"—piece of lint and Swahili "boma"—place of concealment).[1] An alternative term used is "textiloma." More common following abdominal or thoracic surgeries,[1,2] only 1.5% of all textilomas are said to occur following spinal operations[3] and their incidence is reported to be 0.7 per 10,000 lumbar disc surgeries.[3] However, as there is a potential for litigation, this complication is infrequently described in the literature[1,4] and is usually reported by surgeons *not* involved in the primary procedure.

Illustrative Case

A 40-year-old male patient who underwent D5 to D7 dorsal laminectomy for an epidural abscess presented 2 years later with persistent lower dorsal pain and focal tenderness at the lower end of the scar. Magnetic resonance imaging (MRI) of the dorsal spine showed a T1 and T2 hypointense mass in the left paraspinal area over the D8 lamina on the left side, which was enhancing on contrast and had no connection with the spinal canal. The mass was clearly demarcated from the surrounding soft tissue (►**Fig. 1A**–**C**). It was reported as a possible soft tissue tumor. The wound was re-explored and a firm encapsulated gritty mass with gauze fibers inside was excised piecemeal (►**Fig. 1D**). A provisional diagnosis of spinal textiloma was made and confirmed on histopathological examination on hematoxylin and eosin (H&E) stain with the presence of intracellular and extracellular refractile bodies on a background of foreign body giant cells (►**Fig. 2A,B**).

Discussion

Gauze pieces, roller bandages, cottonoids, and pledgets are used by surgeons either to tamponade bleeding or to maintain space created during dissection.[3] If left behind inadvertently, they may either present as operative site infection or much later (even after years of initial surgery) following an aseptic inflammatory reaction in the tissues leading to the formation of a textiloma.[3] While it is possible that the complication will never be detected in patients who are

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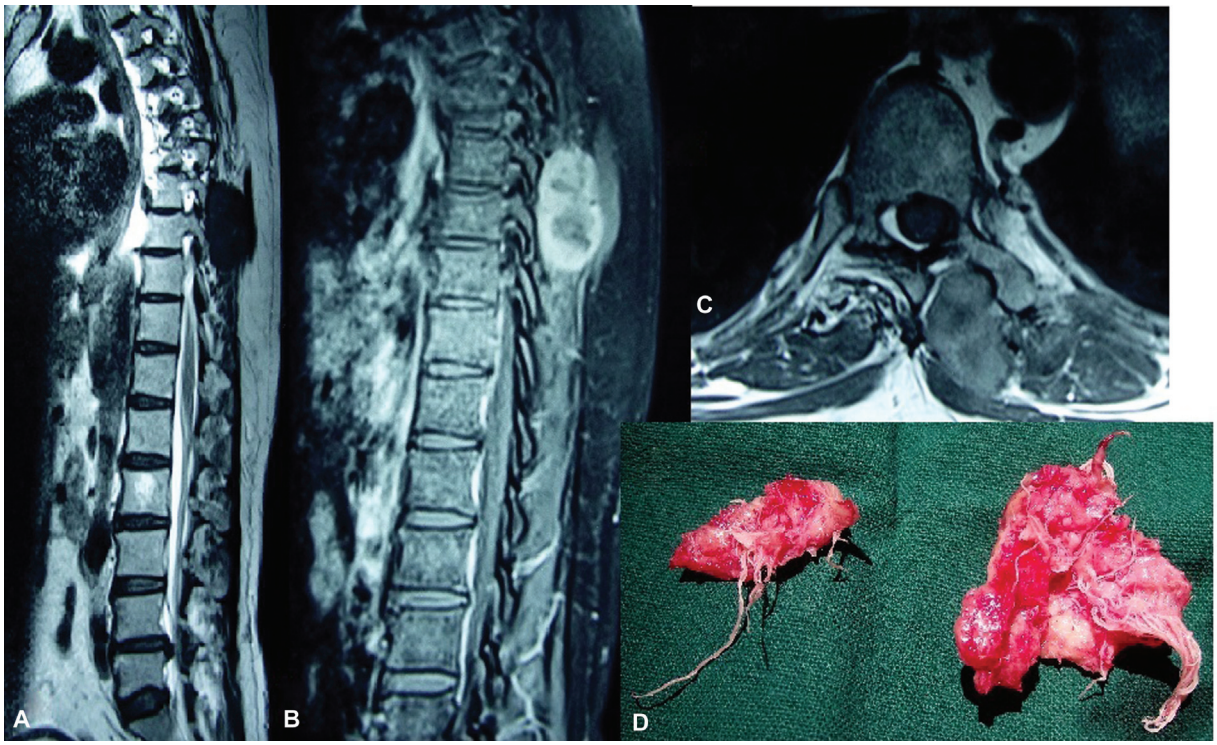

Fig. 1 MRI (magnetic resonance imaging) showing (**A**) hypointense lesion on T2 sagittal scans that is enhancing on contrast (**B**) in the paraspinal region. T1 axial images (**C**) show that the lesion is also hypointense to surrounding muscles and has no connection with the thecal space and (**D**) part of specimen showing gauze fibers inside an organized soft tissue mass.

asymptomatic,[5,6] back pain[3,6,7] and focal tenderness[8] are the commonest presenting complaints in case repots of spinal textilomas.

Textilomas are difficult to diagnose preoperatively as imaging findings are nonspecific. Common differential diagnoses include organized hematoma,[7] abscesses,[3,7] soft tissue tumors,[3,5,6] etc. In our case too, the preoperative diagnosis was a soft tissue tumor.

The classical description[9] of the lesion on MRI is hypointense on T1 sequences and having a hyperintense center with a rim of hypointensity (denoting capsule formation) on T2 sequences. However, others hold that MRI imaging in spinal gossypibomas is nonspecific.[5,10] In our case, although the T1 sequences were hypointense, the T2 sequences were uniformly hypointense as well. It is imperative to excise the lesion completely to eliminate any residual foreign body that may cause future inflammatory reaction.[2]

Spinal textilomas are commoner in obese patients,[3,0,11] cases with unexpected bleeding,[3] bigger incisions, emergency procedures,[3,7,10,11] unplanned changes in surgical procedure,[3,10] inexperienced and inadequate staff and prolonged operative time. These are avoidable complications and the commonest cause is mistakes during the "surgical count."[3] The ways to avoid these include mandatory and meticulous

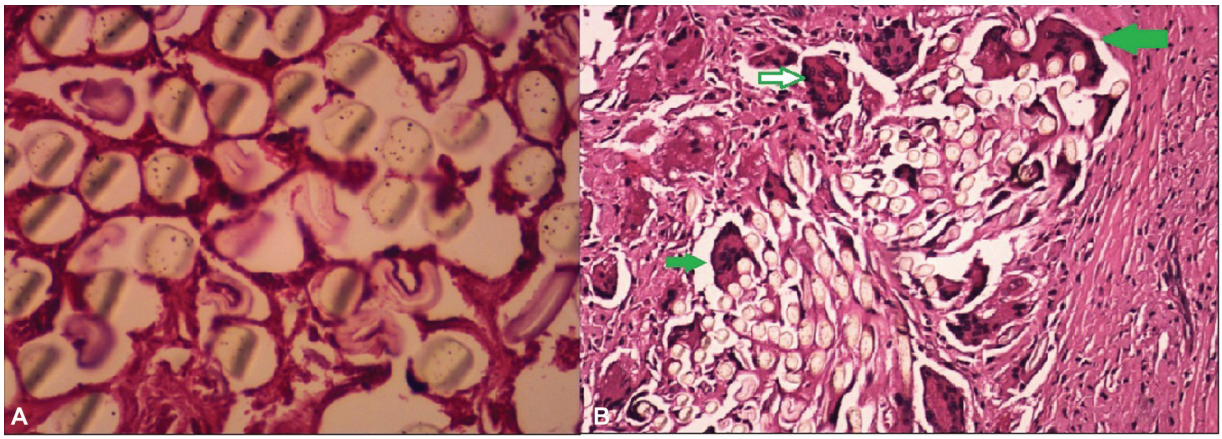

Fig. 2 Histopathological examination with H&E (hematoxylin and eosin) staining showing (**A**) under high power magnification (40× * 10×) aggregates of refractile bodies, which represent the gauze fibers and (**B**) under low power magnification (10× * 10×) multinucleate foreign body giant cells (*open arrow*), some of which are in the process of phagocytosing the gauze fibers (*closed arrows*).

counting of gauze pieces, pledgets and cottonoids (some authors[3] have recommended a count of at least three times), use of gauze with radio-opaque markers,[3,4] avoiding usage of small pieces of linen[3] and using tagged materials[4] such as patties with a "tail."

Conclusions

Retained foreign body (such as pieces of gauze or cottonoid) causing gossypiboma is an avoidable complication and is solely the result of "human error." It is important to appreciate what circumstances it can commonly occur in and be especially vigilant to prevent it from happening. However, it can never be completely done away with and with increase in the number of spine surgeries, the number of textilomas may also be expected to increase. Better reporting may lead to changes in medico-legal attitudes to this problem. Finally, this possibility must always be borne in mind on encountering a paraspinal mass in a previously operated patient.

Informed Consent

The patient has consented to allow the use of his radiological and intraoperative images for publication.

Conflict of Interest

None declared.

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