

Paraspinal Gossypiboma (Textiloma) Mimicking a Soft Tissue Tumor

Prasad Krishnan¹

¹Department of Neurosurgery, National Neurosciences Centre, Kolkata, India

AJNS 2023;18:210–212.

Address for correspondence Prasad Krishnan, MS, MCh, Department of Neurosurgery, National Neurosciences Centre, Peerless Hospital Campus, 2nd Floor, 360, Panchasayar, Garia 700094, Kolkata, West Bengal, India (e-mail: prasad.krishnan@rediffmail.com).

Abstract

Keywords

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

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.

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 operations³ 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

article published online
March 31, 2023

DOI <https://doi.org/10.1055/s-0043-1763529>.
ISSN 2248-9614.

© 2023. Asian Congress of Neurological Surgeons. All rights reserved.

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial-License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

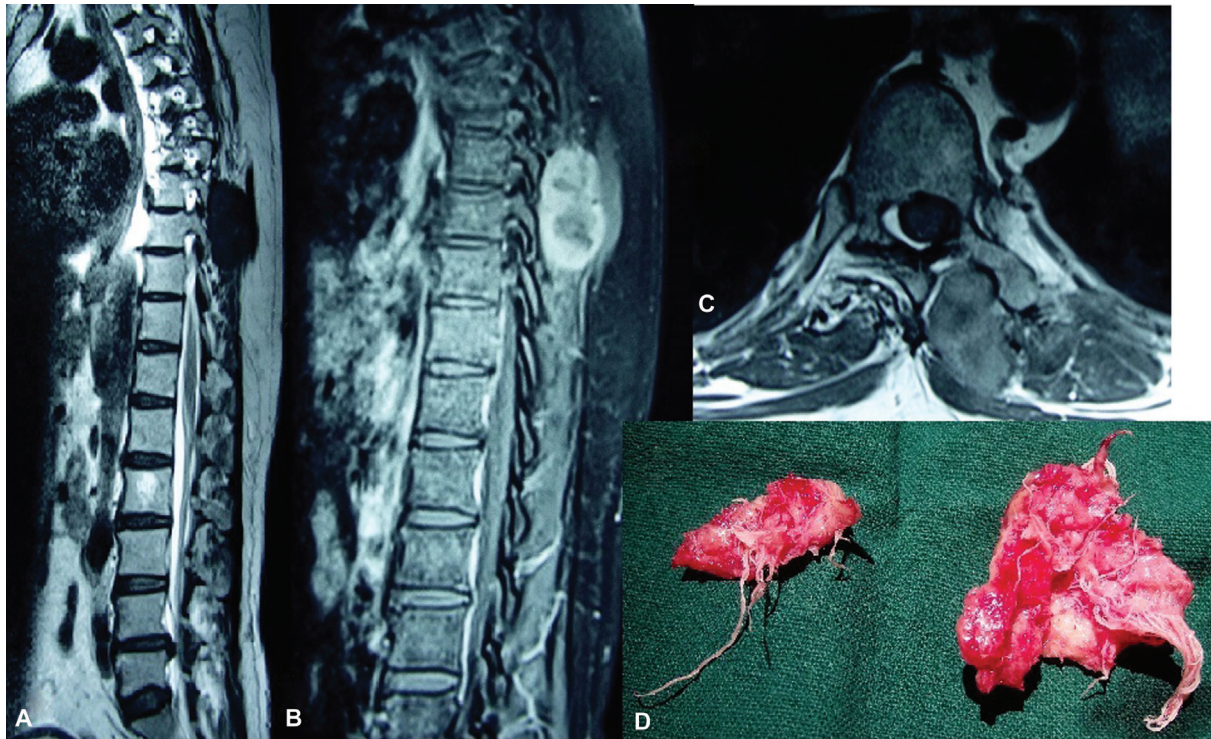


Fig. 1 MRI (magnetic resonance imaging) showing (A) hypointense lesion on T2 sagittal scans that is enhancing on contrast (B) in the paraspinal region. T1 axial images (C) show that the lesion is also hypointense to surrounding muscles and has no connection with the thecal space and (D) part of specimen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

asymptomatic,^{5,6} back pain^{3,6,7} and focal tenderness⁸ are the commonest presenting complaints in case reports 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 description⁹ 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

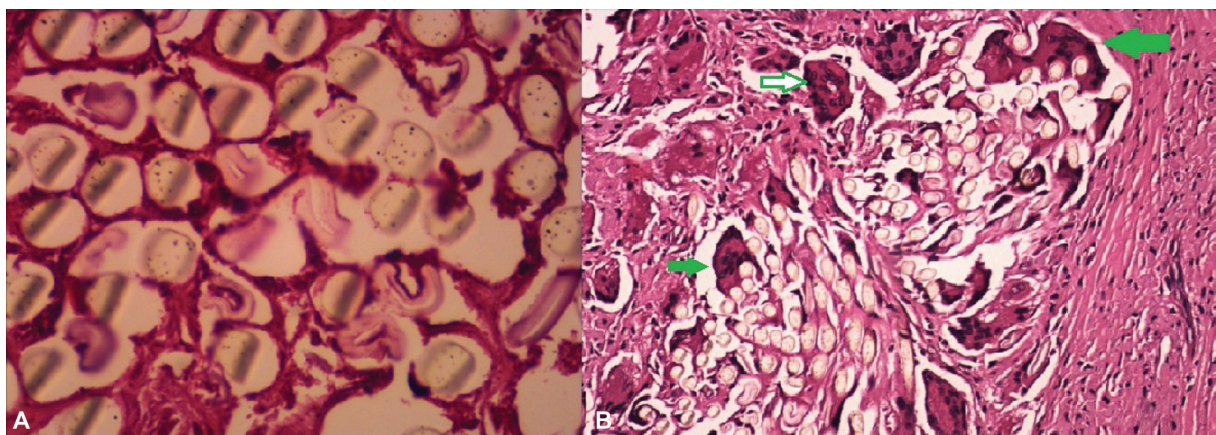


Fig. 2 Histopathological examination with H&E (hematoxylin and eosin) staining showing (A) under high power magnification (40× * 10×) aggregates of refractile bodies, which represent the gauze fibers and (B) under low power magnification (10× * 10×) multinucleate foreign body giant cells (open arrow),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

counting of gauze pieces, pledgets and cottonoids (some authors³ have recommended a count of at least three times), use of gauze with radio-opaque markers,^{3,4} avoiding usage of small pieces of linen³ and using tagged materials⁴ 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.

References

- 1 Garg M, Aggarwal A. A review of medicolegal consequences of gossypiboma. *J Indian Forensic Med* 2010;32:358–361
- 2 Lotfinia I, Mahdkhah A. Spinal textiloma after discectomy: a case report and review of the literature. *World Neurosurg* 2020; 134:343–347
- 3 Sahin S, Atabey C, Simşek M, Naderi S. Spinal textiloma (gossypiboma): a report of three cases misdiagnosed as tumour. *Balkan Med J* 2013;30(04):422–428
- 4 Okten AI, Adam M, Gezeran Y. Textiloma: a case of foreign body mimicking a spinal mass. *Eur Spine J* 2006;15(Suppl 5(Suppl 5, Suppl 5):626–629
- 5 Lee S, Kim B, Kim JS, Choi BSA. A 20-year-old retained surgical gauze mimicking a spinal tumor: a case report. *Korean J Spine* 2016;13(03):160–163
- 6 Kobayashi T, Miyakoshi N, Abe E, et al. Gossypiboma 19 years after laminectomy mimicking a malignant spinal tumour: a case report. *J Med Case Reports* 2014;8:311
- 7 Kucukyuruk B, Biceroglu H, Abuzayed B, Ulu MO, Kafadar AM. Paraspinal gossypiboma: a case report and review of the literature. *J Neurosci Rural Pract* 2010;1(02):102–104
- 8 Atabey C, Turgut M, Ilica AT. Retained surgical sponge in differential diagnosis of paraspinal soft-tissue mass after posterior spinal surgery: report of eight cases. *Neurol India* 2009;57(03):320–323
- 9 Kim HS, Chung TS, Suh SH, Kim SY. MR imaging findings of paravertebral gossypiboma. *Am J Neuroradiol* 2007;28(04): 709–713
- 10 Akhaddar A, Boulahroud O, Naama O, Al-Bouzidi A, Boucetta M. Paraspinal textiloma after posterior lumbar surgery: a wolf in sheep's clothing. *World Neurosurg* 2012;77(02):375–380
- 11 Bani-Hani KE, Gharaibeh KA, Yaghan RJ. Retained surgical sponges (gossypiboma). *Asian J Surg* 2005;28(02):109–115