



Prevena™
Incision Therapy

Use of 3M™ Prevena™ Therapy after spinal fusion complicated by metastatic cancer

Kyle Mueller, MD; Department of Neurosurgery, Brown University & Rhode Island Hospital, Providence, RI

Patient and diagnosis

A 56-year-old male presented with increasing back pain and difficulty walking. Patient medical history included diabetes, smoking, hypertension, and hypersensitivity lung disease. Upon physical examination, diminished sensation and muscle strength was observed in both legs. Laboratory work revealed prealbumin levels at 8 mg/dL and albumin at 2.5 g/dL, indicative of malnutrition. The patient was diagnosed with T10 pathological fracture with severe stenosis and myelopathy.

Procedure

The patient was admitted for a multi-level T6-L2 posterior instrumented fusion with a T10 corpectomy with cement reconstruction (**Figures 1 and 2**).

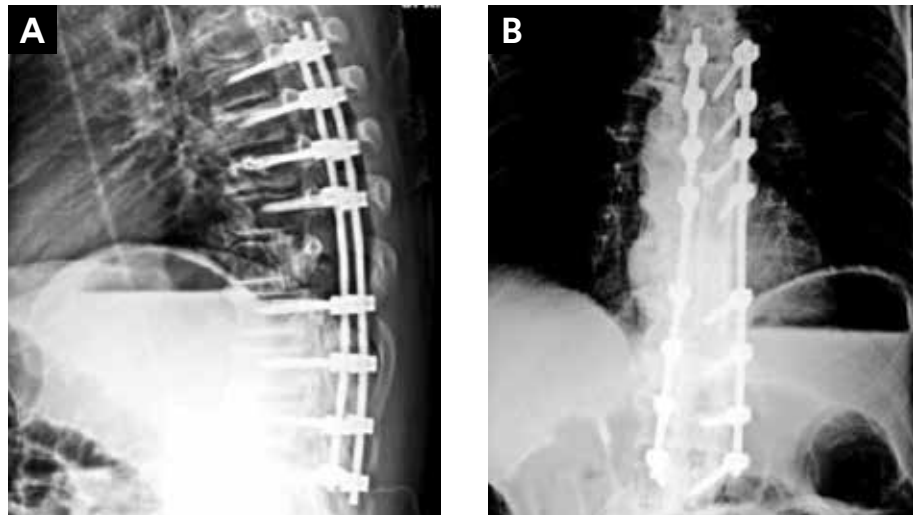


Figure 1. X-rays showing T6-L2 instrumented fusion from the left lateral (A) and dorsal (B) perspectives.

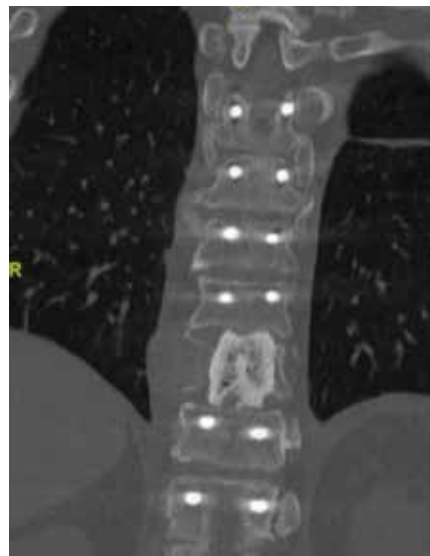


Figure 2. CT scan showing instrumented fusion with T10 corpectomy with cement reconstruction.

Application of 3M™ Prevena™ Incision Management System

After closure of the spinal incision, a 3M™ Prevena™ Plus Customizable Dressing was applied with -125 mmHg negative pressure (**Figure 3**) with the 3M™ Prevena™ Plus 125 Therapy Unit. The drape border was lined with foam tape to ensure that a seal is maintained while the patient recovers in the supine position postoperatively.* Two subfascial 15F silicone channel drains were placed; no suprafascial drains were used due to the limited space and adequate tension-free closure of the fascia and muscle. 3M™ Prevena™ Therapy was continued for 7 days postoperatively.

*To create a continuous seal, clinicians may use sealings strips provided with the dressing. 3M does not recommend use of accessories or materials not provided with 3M™ Prevena™ Incision Management System. For additional safety information, refer to the product's instructions for use.

Discharge and follow-up

The patient was concurrently diagnosed with metastatic lung adenocarcinoma, adding to existing risk factors for postoperative complications. Subfascial drains were taken out when output was <50 mL over 24 hours.

After conclusion of Prevena Therapy on postoperative day 7, the incision was cleaned with a chlorhexidine gluconate and isopropyl alcohol solution. The patient was discharged to acute rehab on postoperative day 9. Six weeks after completion of Prevena Therapy, the incision was completely healed with no complications (**Figure 4**).

Due to the presence of multiple comorbidities and the highly invasive nature of surgery, the patient had an elevated risk of surgical site infection, which can delay oncologic therapy and have a prognostic impact. In this case, Prevena Therapy provided the conditions for optimized incision healing.



Figure 3. Placement of 3M™ Prevena™ Customizable Dressing and application of negative pressure.



Figure 4. Incision healed six weeks after completion of 3M™ Prevena™ Therapy.

As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.

Note: Specific indications, limitations, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. Rx only.



3M Company
2510 Conway Ave
St. Paul, MN 55144 USA

Phone 1-800-275-4524 (NPWT products)
1-800-228-3957
Web 3M.com/medical

© 2022 3M. All rights reserved. 3M and the other marks shown are marks and/or registered marks. Unauthorized use prohibited. All other marks are property of their respective owners.
70-2013-1284-3