NOVEL EXTENDED-WEAR POWDER DRESSING USED IN PATIENT WITH LARGE SURGICAL WOUND S/P SPINAL EPIDURAL ABSCESS EVACUATION AND POTENTIAL RISK OF AUTONOMIC DYSREFLEXIA

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INTRODUCTION

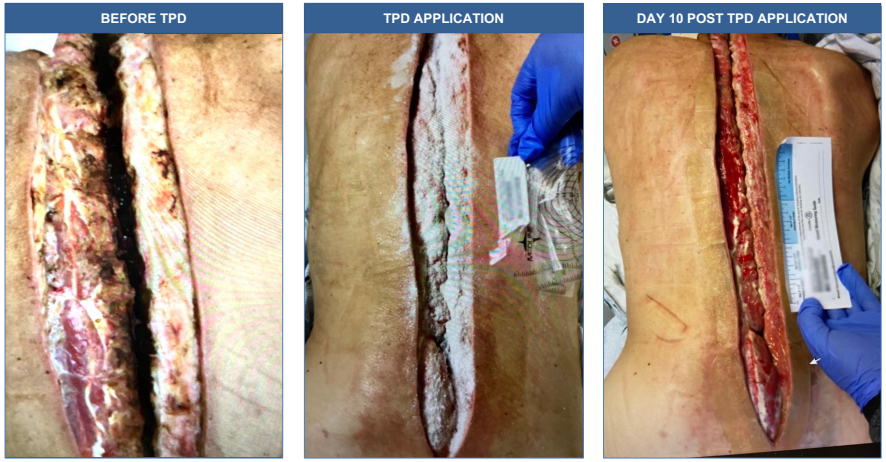
The incidence of spinal epidural abscess has increased in the United States over the last 40 years, largely due to an aging population, increased number of spinal procedures, intravenous (IV) drug abuse, increased number of compromised immune system conditions (e.g., diabetes mellitus, AIDS, cancer, etc.).[1] Surgical decompression remains the mainstay treatment[1]. Postoperatively, these surgical wounds can be extremely difficult to manage due to risk of infection with frequent dressing changes and potential risk for autonomic dysreflexia (AD)[2].

METHODS AND MATERIALS

This case study involves a 56-year-old male with hepatitis C, severe malnutrition, and IV drug abuse that contracted MSSA bacteremia and epidural abscesses from C4-C5, T12-L1, L1-S2-S3. He underwent C3 to C7 and T1 to T9 hemilaminectomies with abscess evacuation. The resulting surgical wound was 55 x 5 x 4 cm extending from posterior cervical to lumbosacral spine with exposed dura and tendon. Since the patient was not a candidate for surgical closure post-operatively, the initial goal for wound treatment was to achieve granulation tissue over the dura. He was initially treated with moist sterile gauze packing 2x daily (for one week) with a ketamine drip and opioids for pain control. NPWT was contraindicated due to exposed dura and concerns for autonomic dysreflexia. Due to the lack of progress with daily packing, the patient was converted to a novel extended-wear transforming powder dressing (TPD*). TPD was applied and topped off once in 10 days.

TPD is an extended-wear powder dressing (up to 30 days) comprised primarily of biocompatible polymers similar to those used in contact lenses. Upon hydration with saline, TPD forms a moist oxygen-permeable matrix that covers, seals and protects the entire wound surface. TPD can be left in place for up to four weeks and topped off as needed.

RESULTS



After conversion to TPD, pain was significantly reduced and the ketamine drip and opioids were discontinued. The patient rapidly developed granulation tissue over the exposed bone and was discharged within two weeks of initiating TPD treatment.

DISCUSSION

For this patient, TPD was a viable alternative until the dura was covered by granulation tissue. TPD facilitated wound healing, reduced wound and dressing change related pain, and decreased the frequency of requisite dressing changes and associated nursing times. No adverse events were reported.

REFERENCES & ACKNOWLEDGEMENTS

(1)Chao D, Nanda A. Am Fam Physician. 2002;65(7):1341-1347; (2) MSKTC.org/sci/factsheets/autonomic-dysreflexia

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