Preventing deep tissue injury from extended procedures

The authors would like to highlight a specialized pressure-reducing plan that evolved from the case presented in their article Miller S, Parker M, Blasiole K, Beinlich N, Fulton J. A prospective, in vivo evaluation of two pressure-redistribution surfaces in healthy volunteers using pressure mapping as a quality control instrument. Ostomy Wound Manage. 2013;59(2):44–48. This case report highlighted the management of deep tissue injury (DTI).

The patient, Mr. K, returned for another electrophysiology (EP) study and catheter ablation in April 2013. Mr. K’s first procedure for ablation of the accessory pathway was unsuccessful in September 2012, but the patient’s supraventricular tachycardia (SVT) was not inducible at the end of the procedure. Mr. K was not deemed at high risk for sudden cardiac death at this time. He was instructed to follow up with the EP physician and his primary care physician and to return for another ablation attempt if his SVT returned. Upon return of symptoms, the second EP study and catheter ablation was scheduled; the EP lab supervisor contacted the wound center to develop a collaborative plan to enhance pressure redistribution during the projected lengthy procedure.

Magnitude and duration of pressure are causative factors in the development of DTIs, and the previous findings suggested the operating room table surface used in previous procedures may have been inadequate in reducing high tissue interface pressures experienced over bony prominences. As a result, a five-inch EP lab table surface was purchased to provide enhanced pressure redistribution for patients undergoing EP procedures. However, when a global positioning system (GPS) must be used during a procedure, the increased surface thickness prevents navigation of the diagnostic and/or ablation catheter being guided by the physician, as was the case for Mr. K in this instance.

For Mr. K’s case, a multidisciplinary team, including representatives from the EP lab and the wound center, assembled to develop a plan to prevent a repeat DTI. The team arrived at the following evidence-based plan of care:

1. Select the procedure table surface best suited to providing pressure redistribution while still allowing function of the GPS device.
2. Apply a self-adherent silicone border foam dressing to protect the sacral area.
3. Utilize a static air seat cushion under the sacral area to redistribute pressure during and after the procedure.
4. Instruct the staff to call a time out every 2 hours to lift the buttock area for 3 to 5 minutes of pressure relief and to allow blood flow into the area.
5. Require a bear hugger warming blanket set for cool air instead of warm to sacral area.
6. Offload the heel.

The 9.5-hour procedure went well. Mr. K was transferred to the Intensive Cardiac Care unit where the registered nurse was included in the prevention plan to reinforce the need to keep Mr. K’s sacral area “offloaded” as much as possible. The wound center team met with Mr. K and his mother the following morning to assess for tissue damage and discharge instruction. The self-adherent silicone boarder foam dressing was removed at this time, and the sacral area was observed to be intact and without any redness or breakdown. Mr. K was reminded to remain cognizant of avoiding pressure to the sacral area over the next few days, to use the static air seat cushion, and to avoid sitting for more than 2 hours without changing position.

Mr. K, his family, and all staff involved in Mr. K’s care were grateful for the positive outcome. This case emphasizes the importance of a multidisciplinary approach for maintaining skin integrity, as well as the benefits of utilizing a multifaceted pressure ulcer prevention plan.

References


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