Title: Effect of Soft Silicone Foam Dressings on Intraoperatively Acquired Pressure Injuries: A Randomized Study in Patients Undergoing Spinal Surgery

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Abstract (300 word limit)

The use of prophylactic dressings to help prevent intraoperatively acquired pressure injuries(IAPIs) merits further study. PURPOSE: To examine how the use of a soft silicone foam dressing affects the development of IAPIs in patients undergoing spinal surgery to obtain baseline data supporting evidence-based nursing care. METHODS: Using a self-controlled study design, 64 patients requiring thoracic or lumbar surgery on a Wilson frame at a hospital in Seoul, South Korea, were recruited between February 12 and September 1, 2018; 50 patients were eligible. Basic demographic, health, and surgical data were obtained. Before surgery, the left or right side chest and iliac crest area were randomly assigned to be covered with a soft silicone foam dressing. The areas were assessed at 2 time points: immediately after and 30 minutes after surgery. RESULT: The majority of participants were male (26, 52%). Average patient age was 62.54 (± 13.83) years. Average length of surgery was 218.4 (± 137 minutes). Immediately after surgery, 26 IAPIs were observed and there was a significant difference between dressed and non-dressed chest areas for number of IAPIs (4% vs. 28%; P = .002). After 30 minutes, the total number of IAPIs was 20 and the difference between IAPIs in the iliac crest area was significant between dressed and non-dressed areas (0% vs. 14%; P = 0.012). After 1 week, there were no chest or iliac crest IAPIs in the areas that had been covered by a dressing; 8(61.5%) chest and 4(30.8%) iliac crest area IAPIs remained when no dressing had been applied. The majority of IAPIs were stage 1 at all assessment times. CONCLUSIONS: The results of this study show that many stage 1 IAPIs do resolve over time and that use of soft silicone foam dressings during spinal surgery can significantly reduce IAPI rates.

Image

Table 3. Presence of a pressure injury immediately following surgery (N = 50)

	Experimental area No. (%)	Control area No. (%)	χ^2	*P* value
Chest (n = 100)[a]				
IAPIs - yes	2 (4.0)	14 (28.0)	10.71	.002
IAPIs - no	48 (96.0)	36 (72.0)		
Iliac crest (n = 100)[b]				
IAPIs - yes	0 (0)	10 (20.0)	11.11	.001
IAPIs - no	50 (100)	40 (80.0)		

IAPIs, Intraoperatively acquired pressure injuries.
[a]The chest area of 50 participants was divided left and right into the experimental area and the control area; these were marked as 100 sites.
[b]The iliac area of 50 participants was divided left and right into the experimental area and the control area; these were marked as 100 sites.

Recent Publications (minimum 5)

Biography (150 word limit)

He is a nurse who cares for neurosurgery patients at Kangbuk Samsung Medical Center in Seoul, Korea. As a nursing clinician, he is currently pursuing a doctoral course at KyungHee University's College of Nursing Science for in-depth nursing research. He is interested in preventive care and methods to reduce secondary complications that patients experience in hospitals.

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