

00406 **Evaluating the Impact of Different Combinations of Operation Table Support Surfaces on Interface Pressure – A Pilot Study**

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Aims: Measurement of interface pressure (IP) between a person's body and support surface is a common method to evaluate effectiveness of support surfaces in pressure-reducing and pressure-redistributing. This study aimed to evaluate the impact of different combinations of support surfaces on IP of surgical patients intra-operatively.

Methodology: A descriptive comparative design was adopted. IP at the sacral region was measured with a pressure mapping system.

IP of 10 volunteers were measured as they lie:

- Supine
- Lloyd-Davies (LD) at 15° and 30° angle
- Reverse Trendelenburg (RT) at 15° and 30° angle

with different combinations of support surfaces: (1) operating table; (2) table with protective sheets (TPS); (3) table with gel overlay (TGO); (4) table with gel overlay and protective sheets (TGOPS).

Result: The lowest average and peak sacral interface pressure (IP) were most commonly seen on the operating table alone; suggesting that having an additional gel overlay was not effective in pressure redistribution. The highest average and peak sacral IP were most commonly seen in the LD15° position for all surfaces. For different angles of tilt per surgical position when using the same combination of support surfaces, average and peak sacral IP were observed to be higher in LD15° than LD30° positions, and higher in RT15° than RT30° positions.

Conclusion: Results demonstrated that current strategies to reduce or redistribute interface pressure were not effective. There is a need to explore other ways of relieving pressure during surgeries, for example, the use of 'pressure-time-outs'. Nurses also need to be aware of the effect of different positioning on sacral pressure; and accurately identify patients most at risk of sacral pressure injuries.