What’s Going On Under the OR Drapes? A Closer Look at Pressure Ulcers Acquired in the Perioperative Period
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Introduction

Surgical patients are at increased risk for the development of pressure ulcers due to multiple complex conditions unique to the operating room and perioperative setting. Currently there is no pressure ulcer risk assessment tool addressing skin injuries that may potentially occur in the perioperative setting.

Methods

- A retrospective chart review was conducted on patients with Hospital Acquired Pressure Ulcers (HAPU) discovered within one week of an operative procedure
- Four acute-care community hospitals were included
- An audit tool reflecting specific risk factors contributing to perioperative pressure ulcer development was utilized
- Inclusion criteria for case patients (study group) included: ≥18 years of age, underwent a surgical procedure, and who developed a HAPU
- The tool was also completed for the control group with a 1:3 ratio who were randomly selected and did not develop pressure ulcers
- The study was conducted for eight months or 20 patients; whichever occurred first

Results

The findings revealed that risk for pressure ulcer development is statistically significant when patients have incontinence, sepsis, decreased temperature, and increased length of surgery.
- Average length of surgery of those who developed pressure ulcers was 365 minutes
- An average of 4.67 days passed between the OR procedure and the discovery of the HAPU
- Pressure ulcer risk increases by 48% with each additional hour of time in the OR (p-value = .056)
- It was noted that the two-side p-value for OR time is .056. When it is viewed as a one-sided p-value, it is .028 and thus significant
- Perioperative hypothermia is a significant factor in intraoperative pressure ulcer development (p-value = .039)
- 80% of the pressure ulcers occurred on the sacrum; other sites included chin, sternum, and trochanter
- 40% of patients were incontinent of bowel or bladder
- 53.3% of patients were septic

Characteristics Sample Size (n= 60)

- Those who developed a pressure ulcer (n= 15)
- Those who did not develop a pressure ulcer (n= 45)

<table>
<thead>
<tr>
<th>Predictor Characteristic</th>
<th>OR (p-value)</th>
<th>Significant Predictors Based on Logistic Regression Model</th>
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<tbody>
<tr>
<td>Temperature</td>
<td></td>
<td>Significant predictors include Braden scale, Braden scale preoperatively, and environmental factors related to skin assessment.</td>
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<tr>
<td>Sepsis</td>
<td></td>
<td>Intraoperatively acquired pressure ulcers and perioperative hypothermia are a look at relationships. AORN J., 92(6), 772-788.</td>
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<tr>
<td>Pressure ulcer stage</td>
<td></td>
<td>The development of a pressure ulcer risk assessment scale for perioperative patients. AORN J., 92(3), 272-287.</td>
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<td>Pressure ulcer location</td>
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<td>Early identification of potential risk factors is the first step in implementing a preventative process that could decrease the incidence of pressure ulcers. Perioperative nurses may need to consider improved handoff communication related to skin assessment. Perioperative nurses should consider skin assessments to establish a preoperative baseline to compare with the patient’s postoperative skin status.</td>
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<tr>
<td>HAPU</td>
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<td>References</td>
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</tbody>
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References

Murphy, C. (2011). The development of a pressure ulcer risk assessment scale for perioperative patients. AORN J., 92(3), 272-287

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