

HAPI Panel of Experts Topic of the Month – July 2019

Critically Ill Patients on Vasopressors

Introduction

One of the most challenging pressure injury prevention scenarios is the critically ill patient on vasopressors. Tissue hypoperfusion occurs not only from the vasopressors, but also from the patient's underlying hemodynamic instability and contributing health conditions. The patient may not tolerate being turned, eliminating a critical pressure-relief strategy. With the primary focus of care being on saving the patient's life, and given the inability to improve skin perfusion or relieve pressure through regular turning, pressure injuries may seem inevitable. What is a caregiver to do?

Focus on what CAN be done

If turning isn't possible, much can still be done to prevent pressure injuries:

- Optimize nutrition and hydration
- Use high-quality materials to manage moisture
- Ensure patients are placed on appropriate specialty beds
- Place preventive foam dressings on the sacrum and heels



Repositioning: think slow, think small, think early, go right

Even when traditional turning is not tolerated, repositioning continues to be an important strategy for critically ill patients and can often be successful when done slowly and in small increments.

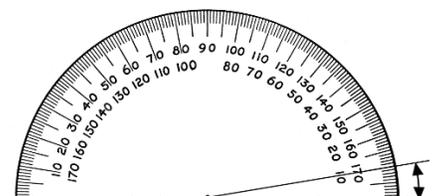


Slow turns

With slow turns, patients are gradually turned 10-15 degrees, held in that position to test for tolerance, and, if tolerated, advanced another 10-15 degrees. Blood pressure, heart rate, respiratory rate, and oxygen saturation are closely monitored. If vital signs do not return to baseline within 10 minutes, the patient is slowly returned to the supine position. Slow turns can be done using gradually-advanced pillows and wedges, so staff are not kept at the bedside the full extent of time needed to assess tolerance.¹

Micro turns

Micro turns and slow turns go hand-in-hand. Micro turns, as the name implies, are very small lateral turns. One member of the HAPI Panel of Experts reports that the CVICU at her hospital is conducting a trial of micro turns using chair waffle cushions in place of pillows. The waffle cushions are less compressible and provide for a turn of about 10 degrees. Micro turns may need to happen more frequently than every two hours, depending on patient tolerance. In trying to determine how often micro turns should be performed, one group of researchers developed a goal of 15 minutes of tissue decompression every two hours; if a patient could tolerate only 7 minutes in a turn, the repositioning time period was shortened to one hour.²



Begin repositioning early in the ICU stay

Nurses may be reluctant to reposition a new, unstable ICU patient, but the patient's orthostatic tolerance can decrease rapidly after being in a stationary position for prolonged periods (ER/transport time, operating room, ICU immobility) and early movement may help the patient recover tolerance more quickly.³ The benefits of early mobility, weighed against the risks of patient intolerance, should be carefully considered. Trials of slow turns and micro turns can be conducted at regular intervals, such as every eight hours. Providing a rest-period before repositioning to optimize oxygenation and physiologic capacity can increase the likelihood of patient tolerance.³



Turn toward the patient's right side

When a patient is turned to either side, the diameter of the inferior vena cava decreases, a phenomenon that is more pronounced when the patient is on their left side than when on their right side.³ When trialing turning with hemodynamically unstable patients, go first toward the patient's right side. Some patients may not tolerate turning toward their left side but can tolerate alternating between supine and right-side positions.

Increase confidence with a protocol

In interviews with nurses on the safety of patient mobility, one study found that over half believed unstable vital signs contraindicated repositioning and one-third expressed concerns about safety with invasive tubes and devices.³ Success with a mobilization program was increased, however, in the presence of a protocol or physician order.³ Developing a protocol in partnership with physicians may increase bedside caregiver confidence, particularly to establish criteria for trialing repositioning and determining patient tolerance.

References

1. Lancaster, S. *Slow turns in the ICU. EHOB Blog. Viewed July 2, 2019 at <https://www.ehob.com/posts/slow-turns-icu>.*
2. Pickham, D., Pihulic, M. Valdez, A., Mayer, B., Duhon P. & Larson, B. *Pressure injury prevention practices in the intensive care unit: real-world data captured by a wearable patient sensor. Wounds, 2018; 30(8): 229-234.*
3. Vollman, K. *Hemodynamic instability: is it really a barrier to turning critically ill patients. Critical Care Nurse, 2012; 2: 70-75.*

The HAPI Panel of Experts is a group of wound care and quality professionals that represent hospitals of varying sizes and geographic regions of Tennessee. The Panel convenes monthly to discuss a topic specific to pressure injury prevention and share their practices and recommendations.

Panel of Experts

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If you would like to suggest a topic for the Panel to discuss, please email your request to Rhonda Dickman at rdickman@tha.com.