

Abstract

Pressure Injury Prevention During Prone Ventilation

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Introduction. Prone ventilation is widely used in critically ill patients with severe respiratory failure to improve oxygenation. However, prolonged prone positioning increases the risk of pressure injuries, particularly on the face and anterior body surfaces, posing a challenge for intensive care nursing practice.

Methods. A structured literature analysis was conducted using a systematic approach guided by the Joanna Briggs Institute framework and reported according to PRISMA recommendations. Studies addressing preventive strategies for pressure injuries in mechanically ventilated adults undergoing prone positioning were identified through database searches. Methodological quality was assessed using JBI critical appraisal tools and evidence levels were classified according to the Oxford Centre for Evidence-Based Medicine. Findings were synthesized narratively following the SWiM framework.

Results. Eight studies met the eligibility criteria. Preventive interventions included prophylactic dressings, positioning strategies, and supportive devices to reduce pressure on vulnerable anatomical areas. Some studies also described structured prevention protocols combining multiple measures. Overall, the evidence suggested these approaches may help reduce pressure injury occurrence during prone ventilation.

Discussion. Structured preventive strategies appear essential to preserve skin integrity in prone-positioned patients. Nursing practice plays a key role in implementing protective measures and monitoring high-risk areas in critically ill patients.

Keywords: Pressure Injury Prevention, Prone Positioning, Critical Care Nursing, Mechanical Ventilation, Skin Integrity

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