



Effective Care of Medical Device Related Pressure Injury in Neonatal

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Background

Neonatal has extremely low birth weight and skin lack of a robust stratum corneum, thin dermis, poor epidermal/dermal adhesion, lack of subcutaneous tissue, and often poor end-vascularization potentiates the damage. (Vita Boyar, 2019) Most they are admit in Neonatal Intensive Care Unit. They must contain multiple medical devices and fixation devices for stabilization; cause of Medical Device-Related Pressure Injuries (MDRPI). MDRPI is key indicators of patient safety and nursing quality in healthcare facilities. (Jackson D, Sarki AM, Betteridge R., Brooke J, 2019)

In preterm neonatal has extremely low birth weight and their poor nutrition or fluid intake, a weakened immune system, skin lack of a robust stratum corneum, thin dermis, poor epidermal/dermal adhesion, lack of subcutaneous tissue, and often poor end-vascularization potentiates the damage. (Vita Boyar, 2019) Most they are admit in Neonatal Intensive Care Unit. They must contain multiple medical devices and fixation devices for stabilization.

Case report

This case preterm extremely low birth weight. Present with a boy 29 weeks, 950 gm. BW. He has PICC line insertion for TPN and stabilized with slab at right arm. After 4 days, found MDRPI stage 4 at Rt. elbow, wound bed has 80% yellow slough and 20% granulation. The doctor consult Enterostomal therapist nurse for management. The goal of management for wound healing. (Figure 1)



Figure 1 Preterm neonatal has extremely low birth weight

Clinical assessment

MDRPI stage 4 at Rt. Elbow, wound size 1x1cm, wound bed yellow slough 80% and granulation 20%. Wound edge well defined and intact, surrounding skin intact and erythema around, excessive exudate. (Figure 2)



Figure 2 MDRPI stage 4 at Rt. Elbow

Intervention procedures

procedure for this case are mentioned by

1. Cleaned with normal saline solution.
2. Applied skin barrier film for protect surrounding skin.
3. Managed bacteria burden and autolytic debridement with honey hydro wound gel.
4. Controlled moisture balance with hydrofiber foam and wrapped conform around.
5. 12 days later, wound bed has 100% granulation, therefore changed management with soft silicone polyurethane foam for promote wound healing.

Results

The wound was healed within 20 days. The parents and care team very happiness. (Figure 3)



Figure 3 Wound progression

Conclusion

MDRPI is much easier to prevention than treat. Care team can take preventing MDRPI by understanding risk factors, tailoring prevention to device type for continuing care and monitoring change.

Reference

- Vita Boyar. Pressure Injuries in the Pediatric Population: Many Questions, Few Answers. Wound management and prevention. 2019;65(4):2460-5245.
- Jackson D, Sarki AM, Betteridge R., Brooke J. Medical device-related pressure ulcers: A systematic review and meta-analysis. International journal of nursing studies. 2019;92:109-20