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CASE STUDY

V.A.C. ® THERAPY IN NEONATAL POPULATION: A CASE STUDY

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ABSTRACT

In Complex case of drug extravasation wound with infection and high fever, V.A.C.® Therapy facilitated faster wound bed preparation, promoted formation of granulation tissue, and better graft take. In this case allograft from mother was used in combination with V.A.C.® Therapy for final closure.

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INTRODUCTION

Many medications given to neonates have the potential to injure when an extravasation occurs. An extravasation is described by the Infusion Nurses Society (INS) as the inadvertent administration of a vesicant solution or medication into the surrounding tissues. Extravasation can result in varying degrees of localized tissue injury and can cause pain, infection, and partial to full thickness tissue loss involving muscles and nerves. If extravasation is severe and depending on the site, skin grafts, long hospitalization and high costs result.

Case Presentation

A 7 day old infant presented with a large infected wound on the left leg (medial aspect). The neonate developed a deep wound with infected tissue after drug extravasations. Infant was running a fever and was irritable on arrival.

Management and Outcome

After assessing the wound at presentation, the wound was debrided of all non-viable and damaged tissue. In consideration of the infected wound and the age of the neonate, V.A.C.® Therapy was applied using minimum negative pressure of -25mmHg. V.A.C.® Therapy (Vacuum Assisted Closure) is an advancement in wound care that promotes active wound healing at the cellular level. Delivering negative pressure at the wound site helps draw wound edges together, removes infectious materials and actively promotes granulation. After the first dressing change on day 4, huge improvement was seen in development of granulation tissue. The remaining slough and infected tissue were removed by debridement, and the second V.A.C.® Dressing was applied, using negative pressure of -50 mmHg. The wound was reassessed after 4 days, and the third dressing change was done. On removal of the third dressing, healthy granulation was seen and no evidence of infection. An allograft was then taken from the mother and applied over the wound. The fourth V.A.C.® Dressing was applied over the graft. V.A.C.® Therapy led to healthy granulation within 10 days of therapy, preparing the wound bed for an excellent graft take. The wound settled very well, and after 3 months, the wound had completely contracted.

DISCUSSION

The incidence of wounds caused in neonates by drug extravasations is 3-4%. Such patients are often at an increased risk of Hospital Acquired Infection where the mainstay of treatment is antibiotics. Also, this leads to longer hospital stay days, thereby increasing the cost of therapy. Treating infected wounds post debridement with V.A.C.® Therapy resulted in healthy granulation, faster wound bed preparation and better graft take for final closure.

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Figure 1. At presentation before the application of V.A.C.® Therapy

Figure 2. At presentation before the application of V.A.C.® Therapy

Figure 3. Improvement in blood perfusion and granulation tissue seen after first dressing change on day 4

Figure 4. Further improvement seen in granulation tissue after second dressing change on day 8

Figure 5. Healthy granulation observed on third dressing change on day 12 and wound bed ready for grafting

Figure 6. Application of allograft from the mother on the wound for final closure

Figure 7. Wound post grafting. Improvement seen after 1 month

Figure 8. Wound completely closed and contracted after 3 months of grafting. The graft take was excelle

V.A.C.® Therapy offered an effective, safe and cost effective option for improved wound healing in infants and neonates.

REFERENCES

Alexander, M., Corrigan, A., Gorski, L., Hankins, J. *et al*. 2010. Infusion Nursing: An Evidence-Based Approach. 3rd ed. St. Louis, MO: Saunder Elsevier.

Sawatzky-Dickson, D. and Bodnaryk, K. 2006. Neonatal Intravenous extravasation injuries: evaluation of a wound care protocol. *Neonatal Network,* 25:13-19.

Thigpen J. 2007. Peripheral intravenous extravasation: nursing procedure for initial treatment. *Neonatal Network,* 26:379–384.

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