

FLAMINAL® IN THE MANAGEMENT OF A NEONATAL EXTRAVASATION INJURY

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Introduction

Extravasation injury is defined as damage caused by the efflux of solutions from a vessel into surrounding tissue spaces during intravenous infusion. Insertion of an intravascular catheter is one of the most common invasive procedures in the Neonatal Intensive Care Unit.

Extravasation damage can extend to involve nerves, tendons, and joints and can continue for months after the initial injury. If treatment is delayed, surgical debridement, skin grafting, and even amputation may be the unfortunate consequences of such an injury¹ This case study describes the management of Baby A, a neonate (born at 25 weeks), who developed an extravasation injury to her left arm due to unknown fluid.

Method

The injury initially presented as blisters, some which had ruptured, with dark purple discolouration to the surrounding skin (fig 1). Within 4 weeks a necrotic eschar had formed over the area (fig 2) which was removed using autolytic debridement methods to leave a wound with two exposed veins measuring 1cm x 1.5cm.

A treatment regimen was devised to prevent infection, protect the underlying structures and manage the exudate from the wound. Flaminal® Forte (Flen Health) was applied to the wound and covered with a non-adherent silicone dressing and sterile gauze. The silicone dressing was selected to minimise trauma to the wound on dressing change as Flaminal® needed to be applied frequently to prevent the veins from drying out.

Results

After 10 days of treatment with Flaminal® Forte the wound was granulating and the two veins were completely covered (fig 3). The wound dimensions had reduced to 0.5 x 0.5 cm. The wound completely healed in 4 weeks (fig 4). Baby A's parents were really pleased with the results as they had been very concerned that she would be left with a large scar on her arm. Once healed, scar management continued by moisturising with olive oil (the chosen moisturiser for neonates in Wolverhampton).

Discussion

A recent survey of regional neonatal intensive care units in the United Kingdom recorded the prevalence of extravasation injury resulting in skin necrosis as 38 per 1,000 neonates, with 70% of these injuries occurring in infants of 26 weeks' gestation or less.² Specific concerns in the neonatal population, in particular in premature neonates, include an impaired epidermal barrier, immaturity of the developing immune system with increased risk for infection and impaired thermoregulation.³ Flaminal® Forte is an Enzyme Alginogel® which has the ability to debride, balance moisture levels and is a very effective antimicrobial agent. It contains two naturally occurring enzymes, glucose oxidase and lactoperoxidase which promote antimicrobial activity without the potential to damage healing skin cells. Flaminal® contains alginate which balances moisture levels within the wound. It has also demonstrated ability to reduce pain in a study of acute and chronic wounds⁴ which is an important consideration in the management of wounds in infants and children.

Conclusion

This case study has demonstrated that Flaminal® is an excellent choice in the management of neonatal extravasation injuries. Flaminal® was easy to apply and remove without causing trauma or discomfort. It kept the wound free from infection and facilitated granulation and re-epithelisation. This resulted in a healed wound with an acceptable cosmetic appearance which was extremely important to Baby A's parents.

Fig 1



Fig 2



Fig 3

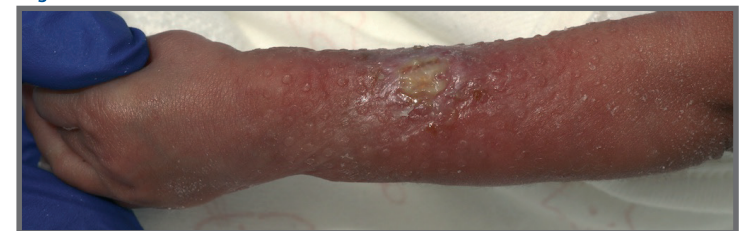


Fig 4



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