

# NEONATAL MOISTURE LESIONS AND THE USE OF FLAMINAL® FORTE

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## Introduction

Nappy dermatitis is one of the most common dermatological conditions experienced by neonates, with a prevalence of between 4% and 15%.<sup>1</sup> It is generally caused by prolonged contact with urine-soaked material, which can be exacerbated by frequent diarrhoea, or fungal colonisation by the resident gut flora, *Candida albicans*.<sup>2</sup>

The reduced barrier function of the stratum corneum places the neonate, and especially the preterm neonate, at risk of variable transepidermal water loss, which can be as much as 15 times greater in pre-term children compared with full-term, and leads to excessive heat loss from the constantly damp skin.<sup>2</sup> This can lead to dehydration and electrolyte imbalance, percutaneous toxicity, and microbial colonisation.<sup>3</sup> The barrier function of the skin is also vulnerable to pH alteration leaving it more prone to bacterial colonisation.<sup>2</sup>

Moisture lesions present as erythema and are characterised by irritation and inflammation. They can be extremely painful and occur when the perineal or perigenital skin comes into contact with urine, faeces or both. Prolonged contact can result in tissue breakdown, increase the risk of infection and so minimising damage is extremely important.<sup>4</sup>

These two case studies describe the management of baby 1 and baby 2, both pre-term baby girls who suffered from moisture lesions caused by faeces and incontinence with superficial skin loss mirror imaged on both buttocks. Previously, both wounds had only been cleaned with water, but due to the location of the wounds there was a high risk of them becoming infected.

Baby 1 was born at 32 weeks and 6 days and weighed 2.1 kilograms. She was seen by the tissue viability nurse at 13 days, a day before moisture lesions appeared. Baby 2 was born at 32 weeks and weighed 1.99 kilograms. She was seen by the tissue viability nurse at 21 days old.

## Method

Baby 1 had a moisture lesion that measured 3cm x 2cm on day 1 of treatment (Figure 1). Baby 2 had multiple small, open lesions on day 1 of treatment (Figure 2). A compromised skin barrier meant there was increased potential for chemicals to be absorbed through the skin and particularly in neonates, who are more susceptible to infection.<sup>2</sup> Ideally, any wound dressing used should be able to protect the wound while being atraumatic, i.e. prevent trauma and pain to the wound or surrounding skin on removal. Painful stimuli could be avoided by choosing dressings that were easy to apply, did not need to be changed too frequently, and promoted wound healing.<sup>2</sup>

The treatment plan for both babies was Flaminal® Forte (Flen Pharma) applied prophylactically 4 times daily into their nappies to prevent infection, act as a barrier to prevent the skin from further breakdown, and assist with healing the lesions already present. The use of other products, such as silver, honey & iodine dressings, was prohibited as they are contraindicated for use in neonates.

## Results

By day 5 the wound in baby 1 had reduced in size to 1cm by 0.5cm (Figure 3), by day 7 it had reduced in size to 0.5cm x 0.3cm (Figure 4), and between day 7 and day 12 Flaminal Forte was used as a barrier until the baby was discharged (Figure 5).

In baby 2 the wound area and number of erythematous lesions had reduced by day 6 (Figure 6) and the skin was healing well. By day 10 the lesions had continued to reduce in size and wound healing was evident (Figure 7), and the baby was able to be discharged.



Figure 1: (Baby 1) Day 1



Figure 2: (Baby 2) Day 1



Figure 3: (Baby 1) Day 5



Figure 4: (Baby 1) Day 7



Figure 5: (Baby 1) Day 12



Figure 6: (Baby 2) Day 6



Figure 7: (Baby 2) Day 10

## Discussion

A heavy bacterial burden in a wound encourages tissue degradation and slough formation, thus preventing healing. Flaminal® Forte (Flen Pharma), an enzyme alginogel, is a dressing that is indicated for preventing bacterial infections and acts as a biodegradable, soft and soothing wound interface reducing pain and trauma during wound care.

It contains 2 naturally occurring antimicrobial enzymes, glucose oxidase and lactoperoxidase which kill bacteria without damaging healing cells.<sup>5</sup> Flaminal® has the capability to absorb excess exudate while remaining in a gelled state, promote debridement, control wound bioburden and reduce pain at dressing change.

## Conclusion

Flaminal® Forte was extremely effective at healing the lesions in these neonatal babies, whilst acting as a barrier for further breakdown and preventing infection. It can be used on preterm babies with extremely sensitive skin, which was reassuring to the parents.

As an enzyme alginogel Flaminal® provided excellent conformability to the lesions despite their difficult location.

## References

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