

## CASE REPORT

# **Granuloma gluteale infantum: an unusual complication of napkin dermatitis**

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### INTRODUCTION

Infants commonly present to paediatric accident and emergency departments with problems relating to napkin dermatitis. Most cases follow a benign course and are managed effectively at a primary care level. The authors report a case of an unusual complication of the condition which required admission to a dermatological unit.

### CASE REPORT

A 7-month-old male infant was brought to this department by his parents without referral from his family doctor. For 6 months he had suffered from a rash in the napkin area which was resistant to various treatments. These had included a variety of 'barrier' creams, topical antifungal agents and Hydrocortisone ointment. Recently the parents had become concerned by the development of two lesions within the napkin area.

Examination revealed a dry erythematous papular rash over the lower abdomen, the centre of which contained two raised, bluish-purple, nodular lesions of differing size and shape. The proximal lesion was rounded and 0.5 cm in diameter, whilst the distal lesion was oval-shaped with dimensions of 5 × 2 cm. (Fig. 1)

The patient was referred to a dermatologist who diagnosed Granuloma Gluteale Infantum. The infant was admitted to hospital for observation and treatment.

Hydrocortisone cream was applied to the granulomatous areas and a fluorinated steroid cream to the remainder of the rash.

Both the napkin dermatitis and granulomas improved on this regimen. The patient remained on this regimen for 3 weeks, requiring only barrier cream thereafter. Subsequent review over 6 months demonstrated slow resolution but not complete healing of the granulomas, without evidence of scarring.



**Fig. 1** Granuloma gluteale infantum: an unusual form of napkin dermatitis.

## DISCUSSION

This particular complication of napkin dermatitis was originally described by Tappeiner & Pflieger (1971). The aetiology is uncertain, but has been related to the use of topical steroid application (particularly the more potent preparations) and occlusive plastic pants. Other workers have postulated other factors including candidiasis (Hamada, 1975), starch granules (Kelly & Campbell, 1973) and, more recently, Rickettsial infection (Ortaine *et al.*, 1980).

Interestingly, there is no correlation between the incidence of the granulomas and the severity of the underlying napkin dermatitis. The onset is generally between the fourth and ninth month of life with a clear prevalence in males (Bonifazi, *et al.*, 1981).

One of the differential diagnoses of the granulomas is Kaposi's sarcoma (Uyeda, *et al.*, 1973) where similar lesions are found on the trunk and extremities.

The natural history appears to be of slow resolution. Treatment centres around the removal of provocative factors with the use of Hydrocortisone cream if required. Interestingly, other authors have treated the condition with fluorinated steroid (Kikuchi & Jono, 1976) thus emphasizing the unclear aetiology in this condition. Lovell & Atherton (1984) postulated that the granulomas represent a response of damaged and occluded skin to chronic exposure to a variety of microbial antigens, which is modified by the use of the more potent topical steroids. Bonifazi *et al.* (1981) point out that as the lesions have only been described within the last 20 years corresponding with the widespread use of plastic pants and topical steroidal creams, these are probably the main provocative factors in specifically predisposed patients.

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## REFERENCES

- Bonifazi E., Gardfalo L., Lospalluti M. *et al.* (1981) Granuloma gluteale infantum with atrophic scars: clinical and histological observation in eleven cases. *Clinical and Experimental Dermatology* **6**, 23–9.
- Hamada T. (1975) Granuloma gluteale infantum. *Archives of Dermatology* **111**, 1072–3.
- Kelly R. & Campbell P. E. (1973) Granuloma gluteale infantum with starch granules in the lesion. *Medical Journal of Australia* **ii**, 438–9.
- Kikuchi I. & Jono M. (1976) Flurandrenolide—impregnated tape for granuloma gluteale infantum. *Archives of Dermatology* **112**, 564.
- Lovell C. R. & Atherton D. J. (1984) Infantile gluteale granulomata—case report. *Clinical and Experimental Dermatology* **9**, 522–5.
- Ortaine J. P., Perrot H. & Thivolet J. (1980) Granuloma gluteale infantile. *Annals of Dermatology and Venereology* **107**, 631–4.
- Tappeiner J. & Pflieger L. (1971) Granuloma gluteale infantum. *Hautarzt* **22**, 383–8.
- Uyeda K., Nakayasu K. & Takaishi Y. (1973) Kaposi sarcoma-like granuloma in diaper dermatitis. *Archives of Dermatology* **107**, 605–7.