

Introduction

Skin viral infection by *molluscum contagiosum* is a common dermatological condition in children¹. The infection is characterized by small, raised skin lesions (growths or wart-like bumps) known as mollusca that may become itchy and red (Figure 1). The infection may appear anywhere in the body and may take up to 4 years to resolve². The virus is contagious and spreads easily from person to person by skin-to-skin contact and by sharing clothing or towels³.

Treatment options include the physical removal of the lesions by cryotherapy, curettage or laser therapy.

However, these treatments are not popular in children as the physical removal of the lesions can be painful and burn the skin. Because the skin infection is self-limited, in most cases, the virus is left to go away on its own without treatment¹⁻². The purpose of this case study is to discuss the management of a paediatric skin viral infection using a Lipoderm topical extemporaneous preparation. Lipoderm is a topical base that consists of a proprietary liposomal component shown to successfully facilitate the penetration of medicines into the skin⁴.



Figure 1. Illustration of skin infection by *molluscum contagiosum* (adapted from KidsHealth®, reprinted with permission) ©The Nemours Foundation / KidsHealth®

Methodology

The cartoon version of the Children’s Dermatology Life Quality Index (CDLQI) was the research instrument used to evaluate the efficacy of the topical extemporaneous preparation. The CDLQI is a widely used questionnaire that measures the impact of skin disease in the quality of life of children aged from 4 to 16 years. It consists of 10 written questions that cover 6 areas of daily activities: symptoms and feelings, leisure, school/holidays, personal relationships, sleep and treatment. Each question has four possible replies scored from 0 (not at all) to 3 (very much). The higher the overall score the greater the quality of life impairment. The CDLQI has been shown to have internal consistency, reliability and responsiveness to change⁵⁻⁶. The cartoon version is a child-friendly pictorial alternative that uses the same text and scoring system as the original questionnaire. Full-color drawings of a friendly dog illustrate the theme of each question. The cartoon CDLQI is self-explanatory and may be completed by the child alone or with the help of caregivers. This version is preferred by both children and parents as it is easier and faster to complete⁵. The CDLQI is copyright worldwide © Children’s Dermatology Life Quality Index. M.S.Lewis-Jones, AY Finlay, May 1993. Formal permission was obtained for use of the CDLQI in this specific case study⁶.

Case Report

A 4 year-old child was diagnosed with a skin viral infection by *molluscum contagiosum* on her buttocks (Figure 2). The infection is likely to have been transmitted by her sibling or cousins, who were also infected by the same virus. The patient had no fever or other complications but suffered from discomfort as a result of the itchy skin lesions. The patient had a tendency to scratch the lesions, which occasionally resulted in skin damage and bleeding. Although the recommended treatment by the physician was burning the lesions, the caregivers opted for a topical imiquimod commercial medicine, without success. The patient suffered from this dermatology condition for about 6 months. An alternative topical extemporaneous preparation was then prescribed including salicylic acid 10% and cimetidine 10% (Table 1), to be applied on the lesions twice a day for 2 weeks. The caregivers obtained standardized digital images of the skin lesions before, during and after 2 weeks of treatment (Figures 2-4).



Ingredients	Quantity
Salicylic acid	10 g
Cimetidine	10 g
Propylene glycol	5 g
Emulsifier (Emulsifix®-205)	3 g
Topical base (Lipoderm®)	72 g

Table 1. Extemporaneous preparation applied to the skin viral infection of the paediatric patient

Figures 2-4. Digital photographs of the child skin viral infection before (left), during (middle) and after 2 weeks of treatment (right)

Results and Discussion

The child answered all questions of the CDLQI (cartoon version), before and after treatment, with the help of the caregiver. An overall score of 12 (range 0 to 30) was obtained before treatment. According to the severity banding for CDLQI scores, it is suggested that the skin viral infection had a moderate effect (40% impairment) on the child’s quality of life. The most affected areas of daily activities were symptoms and feelings (questions 1 and 2). A maximum score of 6 (100% impairment) was obtained for these two questions. According to the child, the skin had been ‘very much’ itchy, scratchy, sore or painful; and the child had been ‘very much’ embarrassed or self-conscious, upset or sad. The next most affected areas were school and sleep with self-reported impairments of 67% and 33%, respectively. According to the child, the skin problem affected the school work ‘quite a lot’ whereas sleep ‘only a little’. An overall score of 0 was obtained after treatment (i.e. all individual scores were rated 0), meaning that the skin problem had no longer any impairment on the child’s quality of life.

Conclusions

Dermatological conditions in children may affect the physiological and psychological development and it is therefore important to assess their impact on the child’s quality of life. The skin viral infection by *molluscum contagiosum* had a 40% impairment on the child’s quality of life but it was fully resolved following 2 weeks of treatment with a topical extemporaneous preparation, which may then be considered a viable treatment option for this dermatological condition.

References

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