

PCCA Lipoderm[®]

Dermatological Conditions: Skin Viral Infection

SUMMARY: A 4-year-old child was diagnosed with a skin viral infection by *molluscum contagiosum*, which had a moderate effect (40% impairment) on the child's quality of life. The caregivers were recommended a compounded medicine containing salicylic acid 10% and cimetidine 10% in Lipoderm. Following 2 weeks of treatment, the condition was resolved and there was no impairment on the child's quality of life.

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Introduction:

Skin viral infection by *molluscum contagiosum* is a common dermatological condition in children [1]. 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 resolve [2]. The virus is contagious and spreads easily from person to person by skin-to-skin contact and by sharing clothing or towels [3]. 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 treatment [1-2].

The purpose of this case study is to discuss the management of a pediatric skin viral infection using a Lipoderm compounded medicine. Lipoderm is a transdermal compounding base that consists of a proprietary liposomal component shown to successfully facilitate the penetration of drugs into the skin [4].

Case Report:

A 4-year-old child was diagnosed with a skin viral infection by *molluscum contagiosum* on her buttocks. 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.

The treatment recommended by the physician was the physical removal of the skin lesions. Although effective, this treatment is deemed to be painful and, therefore, the caregivers opted for topical therapy instead (e.g. Aldara[™]) but without success. The patient suffered from this dermatology condition for about 6 months. A compounded medicine containing salicylic acid 10% and cimetidine 10% in Lipoderm (Figure 2) was then recommended by a compounding pharmacist to be applied on the skin lesions, twice a day for 2 weeks. The caregivers obtained standardized digital images of the skin lesions, before and after treatment with the Lipoderm compounded medicine (Figure 3).



Figure 1.
Illustration of skin infection by *molluscum contagiosum* (adapted from KidsHealth[®] [1], reprinted with permission)
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Salicylic acid	10 g
Cimetidine	10 g
Propylene glycol	5 g
Emulsifix-205	3 g
Lipoderm	72 g

Figure 2.
Compounded medicine applied in the skin viral infections.
PCCA Formula #11653.

Methodology:

The Children's Dermatology Life Quality Index (CDLQI) – cartoon version – was the research instrument used to evaluate the efficacy of the Lipoderm compounded medicine in the management therapy of a skin viral infection by *molluscum contagiosum*. 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), giving a minimum overall score of 0 and a maximum of 30. 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 change [5-7].

The cartoon version of the CDLQI 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 complete [5-6].

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Results and Discussion:

The 4-year-old child answered all questions of the CDLQI (cartoon version), before and after treatment, with the help of the caregiver.

Before treatment with the Lipoderm compounded medicine, an overall score of 12 was obtained (range 0 to 30). According to the severity banding for CDLQI scores, it is suggested that the skin viral infection by *molluscum contagiosum* had a moderate effect (40% impairment) on the child's quality of life. The most affected area of daily activity was 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 area was school (67% impairment), followed by sleep (33%). According to the child, the skin problem affected the school work 'quite a lot' whereas sleep 'only a little'.

After treatment with the Lipoderm compounded medicine, an overall score of 0 was obtained (i.e. all individual scores were rated 0) meaning that the skin problem had no longer any impairment in the child's quality of life.



Figure 3.

Digital image of pediatric skin viral infection by *molluscum contagiosum*: (left) before treatment; (middle) 10 days post-treatment; (right) 20 days post-treatment with a compounded medicine (PCCA Formula #11653).

Conclusions:

Dermatological conditions in children may affect the physiological and psychological development and, therefore, it is very important to assess their impact on the child's quality of life. However, this assessment may be difficult in routine clinical practice. The CDLQI (cartoon version) is a validated questionnaire that is easy and fast to complete and, therefore, it is commonly used in the quality of life assessment of children with dermatological conditions [5-6].

According to the CDLQI assessment, the skin viral infection by *molluscum contagiosum* had a 40% impairment on the 4 year-old child. Following 2 weeks of treatment with a compounded medicine containing salicylic acid 10% and cimetidine 10% in Lipoderm, there was no impairment on the child's quality of life at all.

It is concluded that the compounded medicine (Figure 2) resolved the pediatric skin viral infection in this particular case study and it may then be considered a viable treatment option of this dermatological condition.

The CDLQI is copyright worldwide © Children's Dermatology Life Quality Index. M.S.Lewis-Jones, AY Finlay, May 1993 [7]. Formal permission was obtained for use of the CDLQI in this specific case study.

References:

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