

Original article:

Assess the Effectiveness of 10% KOH Solution in Treatment of Pediatric Molluscum Contagiosum

Umesh Bhoi¹, Shekhar Pradhan²

¹MD, Assistant Professor, Department of Dermatology, Government Medical College, Miraj, Maharashtra, India.

²MD, Associate Professor, Department of Dermatology, Government Medical College, Miraj, Maharashtra, India.

Corresponding author: Dr. Shekhar Pradhan

Date of submission: 19 December 2013, Date of acceptance: 25 Feb 2014

E-mail: drsnpradhan@yahoo.co.in

Abstract

Background: Molluscum contagiosum (MCV) is a benign self limiting infection of the skin caused by a member of the poxvirus family, which has a linear double – stranded DNA genome. Transmission may occur via direct skin or mucous membrane contact, or via fomites. Bath towels, swimming pools, and Turkish baths have all been reported as sources of infection. It is most frequently seen in children and immunocompromised individuals. In minor infections, it is reasonable to await spontaneous resolution, as this is least distressing to a child. There is a risk, however, of widespread cutaneous dissemination, discomfort and bacterial super infection. Active treatments for molluscum contagiosum include destructive methods, occlusion and cytotoxic, immune modulating and antiviral preparations.

Aims: The present study was designed to evaluate the use of 10% KOH in the treatment of molluscum contagiosum attending the tertiary hospital.

Materials and Methods: A total number of 25 pediatric cases were included in the present study who attended the Dermatology OPD in a tertiary care hospital. Patients who were known HIV seropositive were excluded in our study.

Results: Out of 25 pediatric patients 17 were male child and 8 were females. The range of age was from 6 years to 14 years. Among a total of 25 cases 8 (32%) patients were having lesions distributed over a single area while in 17 (68%) cases discrete lesions were present in distant sites. Out of 25 cases 22 (88%) cases completed the study. The average duration for clearance of all the lesions took about 26 days. 3 patients experience severe stinging and one patient had secondary infection.

Key words: Molluscum Contagiosum, Potassium Hydroxide, Cutaneous, HIV Positive, Immunodeficiency, Pruritus, Autoinoculation.

INTRODUCTION

Molluscum contagiosum (MC) is a benign but nonetheless frequently troublesome viral infection that most often affects young children.¹An incubation period for MCV of 2 weeks to 6 months has been reported, with the published infection frequency occurring in late childhood between the ages of 8 and 12 years.² It is characterized by smooth, dome-

shaped, discrete, opalescent papules with a central core that occasionally develops surrounding areas of scale and erythematic (molluscum dermatitis). Patients and families are bothered by this infection because of its often prolonged course, as it may persist for months to years. Autoinoculation and koebnerisation also play a role in the spread of lesions. Recent reports also document the possibility

of vertical transmission from mother to neonate during the intrapartum period.³ Diagnosis is usually straightforward. Evaluation of the central contents using a crush preparation and Giemsa staining can be carried out when necessary and histopathological evaluation can be performed as needed. A 2009 Cochrane Database analysis of treatments for MC, which identified only 11 therapeutic studies of high quality, found that no single intervention is convincingly effective for the treatment of MC.⁴ Till date; there is no specific treatment available for molluscum contagiosum.

Various chemical agents viz. podophyllin, tretinoin, cantharidin, trichloroacetic acid, silver nitrate, phenol, salicylic acid and tincture iodine have been used with variable results.⁵ Potassium hydroxide (KOH) is a strong alkali that has long been known to digest proteins, lipids, and most other epithelial debris of skin scrapings to identify fungal infections.⁶ KOH is known to penetrate deeply and destroy the skin because it dissolves keratin. It can also cause an irritant reaction in the skin varying with the concentration, body region and individual susceptibility.⁷

AIMS AND OBJECTIVES

The present study was designed to evaluate the use of 10% KOH in the treatment of molluscum contagiosum in pediatric age group attending the tertiary hospital.

MATERIALS AND METHODS

A total number of 25 pediatric patients were enrolled in the present study who attended the Dermatology OPD in a tertiary care hospital. Informed consent from their parents was taken before enrolling in the study. Patients who were known HIV seropositive were excluded in our study. Patients with their parents were instructed to apply the 10% KOH

solution on the affected lesion by cotton bud only once a day at night and to wash off in morning. They were instructed to apply little amount of solution to the lesion so that the solution will not spill over the surrounding normal skin. They were also informed regarding reporting of any untoward effects like erythema, irritation or burning or ulceration if occurs can follow up immediately or can stop the medication. Patients were instructed to follow up weekly in the OPD. Assessment of the lesions in the form of response or side effects was done at week 4, week 8.

RESULTS

In this study total 25 patients were treated with 10% KOH solution to be applied at bed time. Out of 25 pediatric patients 17 were male child and 8 were females. The range of age was from 6 years to 14 years. Among a total of 25 cases 8 (32%) patients were having lesions distributed over a single area while in 17 (68%) cases discrete lesions were present in distant sites. Out of 25 cases 22 (88%) cases completed the study. The average duration for clearance of all the lesions took about 26 days. The total duration during which the clearance of the lesions took place was in between 18 to 28 days of treatment. All 22 cases were following up with us and there were no recurrences during the period. No child had any severe type of adverse reaction. The most common finding was presence of erythema and stinging sensation immediate post application. 3 patients experience severe stinging and one patient had secondary infection. The inflammation over the local site would start at around 4-5 days.

DISCUSSION

Molluscum contagiosum is caused by MC virus, the largest human virus and sole member of genus molluscipox.⁸ In our study the average duration of

clearance of lesions was seen in 26 days. In a similar study done by Mahajan B B⁹ using 20% KOH in children achieved complete clearance of the lesions after a mean period of 17 days. In another study by Can B¹⁰ with 10% KOH found complete clearance of lesions in 37 (92.5%) patients receiving topical 10%KOH solution after a mean period of four weeks. Three patients exhibit severe stinging sensation. In a

developing country like ours, KOH solution offers an affordable and equally efficacious and even faster acting option, albeit with a higher chance of irritant dermatitis.¹¹ Even though 10% KOH solution is associated with some local side effects, it is a safe, effective, inexpensive and noninvasive alternative treatment of MC in children.

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