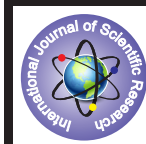


## A Comparative Study of Treatment of Molluscum Contagiosum with 100% Trichloroacetic Acid and 88% Phenol



### Medical Science

**KEYWORDS :** molluscum contagiosum, phenol, trichloroacetic acid

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### ABSTRACT

*Introduction: molluscum contagiosum is the most common cutaneous viral infections. TCA and phenols are easily available treatment options for such patients. Materials and methods : This is a retrospective study of 122 patients treated with 100% trichloroacetic acid and 88% phenol at private centre. Results : Total 122 patients were evaluated. Out of 122 patients 45 were treated with trichloroacetic acid 100% and 77 were treated with 88% phenol. In TCA group minimum 3 to maximum 5 sittings were done for complete clearance of lesions. In phenol group minimum 1 and maximum 3 sittings were done. Erythema and induration was noticed after every application in both the groups. Post inflammatory hyperpigmentation was seen in 55 patients of phenol application (71%). Conclusion: Phenol 88% application can be recommended as office procedure for molluscum contagiosum patients as recurrence rate is very low and duration of treatment is short. It is also well tolerated by children and adults.*

### Introduction

In dermatology practice molluscum contagiosum is the most common cutaneous viral infections we come across. Recurrence of lesions and recalcitrant lesion is the big headache.

All current treatment modalities are associated with substantial pain, tissue destruction, and frequent recurrence. However, these procedures are not well tolerated by children owing to pain and fear. These procedures are also not feasible for widespread lesions although some dermato-surgeons have performed them under general anesthesia.[1]

Trichloroacetic acid and phenols are easily available chemicals with all dermatosurgeon[2]. Application method is less time consuming and does not require any anaesthetic measures. Also well tolerated by children.

### Materials and methods

This is a retrospective study of 122 patients treated with 100% trichloroacetic acid and 88% phenol at private centre w.e.f. 1<sup>st</sup> jan 2012 till 30<sup>th</sup> april 2013. Data obtained from hard copies of files of patients maintained and computerised record.

All the patients were diagnosed clinically. Twenty four adults were evaluated with ELISA for human immunodeficiency virus and none were positive.

Both the chemicals were applied over all lesions till frosting is seen. Only trichloroacetic acid was neutralised with tap water and phenol was left over the lesions without neutralising. Spillage was neutralised with wet swab in cases of TCA and spirit gauge in cases of phenol. Patients were followed up every 15 to 20 days. Repeat application done in cases of left over lesions or new lesions. End point was complete clearance of lesions in patients who had regular follow up.

### Results

Total 122 patients were evaluated. Sixty five were females and rest 57 were males. Age group was between 5 yr to 44yrs . Twenty four were adults and 98 patients were under 13 years of age.

Out of 122 patients 45 were treated with trichloroacetic acid 100%. In this group 9 patients were adults and 36 were children under 13 years of age. Out of 77 patients treated with phenol 88% 15 were above 13 years of age and 62 were children below 13 years of age.

In TCA group minimum 3 to maximum 5 sittings were done for

complete clearance of lesions. Out of 45 patients 23 (51%) patients had required 3 sittings, 15 patients were cleared of lesions in 4 sittings and 4 patients had required 5 sittings and 3 were lost to follow up.

In phenol group minimum 1 and maximum 3 sittings were done. Out of 77 patients 31 (40%) patients were cleared of molluscum lesions in 1 sitting. Twenty five (32.4%) patients were improved in second sitting. Fifteen ( 19.4%) patients were cleared of lesions in third sitting. Six patients were dropped out.

Phenol was better tolerated by paediatric patients. Erythema and induration was noticed after every application in both the groups which subsided in 2- 3 hrs. In three patients erythema and induration remained for 3 - 7 days in phenol group.

Two patients with phenol application reported mild giddiness which subsided with adequate hydration. Cardiac arrhythmias, renal toxicity was not noticed in any case. Post inflammatory hyperpigmentation was seen in 55 patients of phenol application (71%) which also subsided in majority of patients in 6 to 12 weeks.

### Discussion

Liquified phenol consists of 88% solution of phenol in water and causes kerato coagulation by precipitating the surface proteins. [3] At this concentration, phenol causes medium depth wounding which creates changes through necrosis of the epidermis and part or all of the papillary dermis with an inflammatory reaction in the upper reticular dermis.[3] . Immunomodulation is considered to be the main mechanism of action. Rosenberg and Drake have hypothesized that the lymphocytic cells that aggregate during contact allergy eliminates the antigenic stimulus.[4] Phenol is well tolerated by paediatric as well as adult patients. Phenol requires less number of sittings compared to TCA. Side effects of phenols are negligible however phenol can not be used in patients with renal pathology, arrhythmias and pregnancy.

TCA cautery is also good office procedure for molluscum contagiosum and it can be safely used in pregnancy. Recurrence rate is high with TCA so that repeated sessions are required. Post inflammatory hypo/hyperpigmentation is insignificant. We had not seen side effects like scarring in our patients as we had applied with correct method and prompt measures to neutralise spillage.

Syed *et al.*[5] treated males having molluscum contagiosum with an analog of imiquimod 1% in cream. The medication was self administered by the patients on their lesions at home, 3

times daily for 5 consecutive days per week for 4 weeks. The frequent application of medication in this study may be due to the lower concentration of imiquimod. Barba *et al.*[6] treated 13 children with topical imiquimod 5% cream every night for 4 weeks. All the above studies indicate that the concentration of imiquimod and frequency of application require further evaluation. Hengge *et al.*[7] noted improvement in 12 out of 15 patients with 5% imiquimod. They found that 8 (53%) patients with mollusca achieved total clearance, and 4 (27%) patients showed >50% reduction in molluscum size. In our study we had treated all patients still clearance of lesions except the dropped out cases. Average time for clearance of lesions with phenol was 1 month compared to TCA where it was 2 months.

Amol Metkar et al [1] had shown equal efficacy of both imiquimod and 10 % KOH in 1 to 3 months of treatment. Around 40 % cases had shown complete clearance in both the group. Cost

effectiveness of therapies like KOH , TCA , Phenol are much superior than imiquimod. Chances of successful treatment with complete clearance are very high with phenol compared to KOH and TCA.

Mahajan B B et al [8] showed complete clearance of lesions with 20 % KOH in mean period of 17 days in 89% of patients. This will require good training and compliance of parents to avoid unwanted side effects and proper application. While phenol requires physician skill and procedure is done under his observation which will reduce further complications.

### Conclusion

Phenol 88% application can be recommended as office procedure for molluscum contagiosum patients as recurrence rate is very low and duration of treatment is short. It is also well tolerated by children and adults.

## REFERENCE

1. Amol Metkar et al. An open, nonrandomized, comparative study of imiquimod 5% cream | versus 10% potassium hydroxide solution in the treatment of molluscum contagiosum. | Indian J of dermatol venereol leprol. Nov-Dec, Vol 74 ,Issue 6 | | 2. Goldman L. Dermatologic surgery in an ambulatory surgery center: Ten years | experience. Cutis 1984 34:65-6,68. | | 3. | Beeson WH. Facial rejuvenation: Phenol-based chemoexfoliation. In: Coleman WP, | Lawrences N eds. Skin Resurfacing. Baltimore: Williams and Wilkins, 1998;71-86. | | 4. Rosenberg E, Drake L. Alopecia areata (letter). Arch Dermatol 1976;112:256. | | | 5. Syed TA, Goswami J, Ahmadour O, et al. Treatment of molluscum contagiosum, in males | with an analog of imiquimod 1% in cream. J Dermatol (Tokyo) 1998;25:309-13. | | 6. Barba AR, Kapoor S, Berman B. An open label safety study of topical imiquimod 5% cream | in the treatment of molluscum contagiosum in children. Dermatol Online J 2006;7:20. | | 7. Hengge UR, Esser S, Schultewolter T, Behrendt C, Meyer T, Stockfleth E, et al. Self | administered topical 5% imiquimod for the treatment of common warts and molluscum | contagiosum. Br J Dermatol 2000;143:1026-31. | | 8. Mahajan B B et al. Topical 20% KOH-An effective therapeutic modality for molluscum | contagiosum in children Indian J dermat venereol leprol 2003; 69 :2:175-177 |