Topical Retinoid In Treatment of Molluscum Contagiosum in Iraqi patients in Khalis City (Placebo Control Study)

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Abstract

Background: Molluscum Contagiosum is a common cutaneous viral infection seen in children and adults. It is caused by a DNA virus, related to Pox group of viruses.

Objective: To determine the efficacy of topical retinoids in treatment of Molluscum Contagiosum patients in Khalis City.

Patients and Methods: A placebo control study was carried out during the period from 1st December 2015 till 1st August 2016; forty patients with Molluscum Contagiosum in Khlalis City (24 males and 16 females, with age group range between 3-40 years) were randomly divided into two groups. The group 1 has given 0.05% topical retinoids cream to be applied at bed time over lesions. The group 2 has given placebo (aquarosa) to be applied at the bed time over the lesions; the durations of treatment were six weeks for both groups.

Results: At the end of six weeks the first group shows 65% healing rate (13 patients) with mean lesions number decrease from 9 to 2; while the second's group only one patient shows complete healing (5%) with mean lesions number decrease from 9 to 7.

Conclusion: Topical retinoid is effective treatment of Molluscum Contagiosum after Six weeks course of treatment as compared with placebo with success rate of 65% and 5% respectively.

Key words: Molluscum Contagiosum, Topical Retinoids, Aquarosa.

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Introduction

Molluscum Contagiosum is a common benign, viral skin infection was first detected by Bateman in the year 1814[1][2]. Molluscum Contagiosum is largest human virus and sole member of genus molluscipox [3]. They spread by touching, autoinoculation (particularly in atopic patients), by scratching or secondary to shaving, and may result in a linear distribution of lesions. It occurs worldwide and primarily affects children and young adults [4].

The skin lesions characteristically appear as raised, rounded bumps that are waxy white, pink, or flesh colored. Size of lesion may vary from tiny 1mm papules to large nodules over 1 cm in diameter. After several months, inflammatory changes result in the production of white fluid, crusting, and eventual destruction of the lesion. New lesions tend to appear as old one resolves as a consequence of virus spreading to other areas of skin [5]. The diagnosis is done clinically. Incubation period varies from 14 days to 6 months [6].

The indications of treatment that includes alleviating discomfort, itching; social stigma associated with many visible lesions;

cosmetic reasons; limiting its spread to other areas of the body and to other people; preventing scarring and secondary infection; and preventing trauma and bleeding of lesions[7][8]. When choosing a treatment, several aspects are considered, such as effectiveness and recurrence condition [9][10].

Secondary aspects, such as the physical and psychological tolerance of therapy, the patients or parent's preference, the family's economic situation, and the availability and ease of access to medical practice, should also be taken into account [11][12].

The treatment of this infection including waiting for it to disappear on its own .Curettage is considered in several studies to be the gold standard in the treatment of MC; it is cited as the most effective and as having the lowest recurrence rate [13][14].Other common cited treatment techniques are cryotherapy; cantharidin, imiquimod, trichloroacetic acids and the combination of salicylic and lactic acids and potassium hydroxide are the most common [15]. Topical retinoids also commonly used in treatment of Molluscum Contagiosum in many studies[17][18].

To determine the efficacy of Topical Retinoids in treatment of Molluscum Contagiosum in patients of Khalis city.

Materials and Methods

A placebo control study was carried out in Department of dermatology, in Al Khalis general hospital during the period from 1st December 2015 till 1st August 2016. The study sample included forty patients (24 were males, and 16 were females) aged from3 to 40 years clinically diagnosed with Molluscum Contagiosum .

Patients were allocated randomly into two groups; Group (1): application of 0.05% tretinoin cream once a day at night for six weeks. Group (2): application of aquarosa cream once a day at night for six weeks. Follow up of patients was done and at each weekly visit, the resolution of Lesions, the incidence of side effect, such as erythema, and edema, pruritus, hyperpigmentation, scarring and secondary infection in the place of the lesions were analyzed at each visit. After end of treatment follow-up of patient were done for another six weeks.

Statistical analysis

All data were analyzed by statistical package for social sciences version18 (SPSS18). Continuous variables presented while discrete variables presented as numbers and percentages. Chi square test for independence used to test the significance of association between discrete variables where findings with P value less than 0.05 were considered significant.

Result

Of the 40 patients, 16% were females with average age of 9 year. 70% presented less than 10 lesions, 20% presented from 11 to 15 lesions, and 10% presented more than 15 lesion at the initial examination.

At the end of six weeks: showed that the mean lesion count decreased from 9 to 2 in group 1 treated with tretinoin with 13 patients shows complete healing with success rate of 65%, only three patients complaining from mild to moderate irritation which does not indicate stopping the treatment and those patients were asked to decrease duration of application the drugs (for three hours at night). Seven patients were not responded to therapy.

In second group the mean lesions count decrease from 9 to 7 with only one patient shows complete healing with success rate of 5%. No irritation has been detected in second group. At end of follow up periods only one patient shows recurrence.

Table (1): Results of patients treated with topical retinoids.

Number of patients	Number of lesions at start of treatment	Number of lesions after six weeks of treatments
1	10	0
2	4	0
3	5	0
4	6	0
5	5	0
6	7	0
7	8	0
8	5	0
9	7	0
10	5	0
11	9	0
12	8	0
13	7	0
14	5	1
15	12	2
16	15	3
17	14	8
18	13	8
19	18	9
20	17	9
	Average=9	Average=2

*P value < 0.05

Table (2): Results of patients treated with aquarosa.

Number of patients	number of lesions at start of treatment	Number of lesions after six weeks
1	9	7
2	5	3
3	4	2
4	7	4
5	4	0
6	8	6
7	9	7
8	4	2
9	8	6
10	4	3
11	10	7
12	7	5
13	8	7
14	4	3
15	13	11
16	14	12
17	15	13
18	12	10
19	17	14
20	18	14
	Average=9	Average=7

Discussion

There is no consensus regarding the most effective treatment for Molluscum Contagiosum. Although waiting for the condition to resolve on its on is an option, many parents and patients prefer the removal of the lesions. The treatments are classified into destructive, immune modulators and antiviral.

A review by Brown and colleagues compared several treatment options for MC, describing their advantages and disadvantages. There has been a preference for destructive treatments (cantharidin [keratolytic agent], cryosurgery and curettage) because they showed fast results with few adverse effects [16].

The present study shows that are topical Retinoids (Retin A cream 0.05%) was effective in treatment of Molluscum Contagiosum with successes rate of (65%) as compared with placebo (5%).

Six weeks courses were required. Irritation was a rare side effect occurring in three patients about (15%) and not required stopping the treatment only decrease the time of application. Early treatment was required as patients with few lesions number were response better than those with multiple and giant lesions.

In comparison with other treatments modalities topical tretinoin is effective, safe, painless, and can be used at home; but the disadvantages is prolong treatment course (about six weeks).

In comparison with other studies; Rajouria et al found that topical tretinoin 0.05% is effective for treatment of Molluscum Contagiosum with success rate of 56% but used it for four weeks only, while in our study we used the topical retinoids for six weeks with successes rate of 65% [17].

In other study Goyal et al found that the mean lesion count of Molluscum Contagiosum was decrease from 8.35 to 2 after four week's treatment with 0.05% tretinoin, while in our study the mean lesion count decrease from 9 to 2 but after six weeks of treatment [18].

In conclusion, we concluded from this study that's the treatment of this condition must be individualized, taking the patients preference, tolerance and availability of time into consideration.

It shows that the topical tretinoin therapy is easy to used, safe in children and can be used at home with minimal side effects; but required long time of treatment (about six weeks).

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