



RESULTS OF INTRALESIONAL TRIAMCINOLONE ACETONIDE INJECTION IN PRIMARY AND PERSISTENT MIEBOMIAN CYST IN TRIBAL AREA OF DDDNH.

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ABSTRACT

Aims And Objectives: To evaluate the efficacy of intralesional triamcinolone acetonide (ta) 40mg/ml injection in persistent meibomian cyst (chalazion). **Material and Methods:** 50 patients with chalazion were treated at civil hospital, Silvassa over a period of 1 year. An intralesional injection of 0.2 ml ta (40 mg/ml) was given to the patients with recurrent chalazion. Data regarding lesion size at the time of injection and lesion regression or recurrence were recorded at the 2-week interval for next 2 follow-ups. Success was defined as either complete resolution of lesion or at least an 80% decrease in size from original size. If the lesion recurred or regression was minimal (<50%) further injections were given as needed. Patients who refused for 2nd injection or who did not respond even after 2 injections were referred for surgical incision and curettage. **Results:** Out of 50 patients 46 (92%) patients had decrease in the size or complete resolution of lesion with intralesional ta. 4 (8%) patients had no change in size. Out of the 46 (92%) patients in which we observe the size reduction, 3 (6%) were with decrease in size between >50% but <80% the standard we set for this study. **Conclusion:** In our study we observed that intralesional ta is effective in reduction in size with primary or persistent meibomian cyst with minimal complications. Patient needs 1 or 2 injections to achieve good result. Recurrent meibomian cyst responds well with this treatment regardless age, sex of the patients. Lesion who fails to respond even after 2 injections is less likely will get benefit from this treatment and should be consider for surgical incision and drainage.

KEYWORDS :

INTRODUCTION

Meibomian cyst also known as chalazion is a chronic inflammatory granuloma of the tarsal gland (meibomian gland) caused by retained sebaceous material inside the gland. ^[1] Chalazias are typically benign and self-limiting, though they can develop chronic complications. Persistent of the lesion is common even after long conservative management exact cause is unknown. ^[2] It is a common condition, though the exact incidence worldwide is not documented. It appears to affect males and females equally, but exact numbers are not available. Chalazias occur more commonly in adulthood. ^[3] More common in younger age group and can be associated with high myopic patients, chronic blepharitis and some systemic diseases like diabetes. Physical findings consistent with chalazion include a palpable, usually non-tender (though in acute inflammation there may be some associated tenderness), non-fluctuant, non-erythematous nodule on the eyelid. The chalazion would be expected to be less than 1 cm in size. It presents more often on the upper lid as a single lesion, though multiple lesions are possible. ^[3]

Histopathology evaluation not needed frequently in the diagnosis and management of chalazion. If obtained, histological examination reveals a chronic granulomatous reaction with numerous lipid-filled, Touton-type giant cells contains the lipid material at the centre. lymphocytes or macrophages, often seen at the peripheral part of the lesion as this is an inflammatory process. If a secondary bacterial infection develops, then one could expect to find an acute necrotic reaction with PMNs. ^[4] Meibomian cyst or chalazion is managed conservatively by using warm compression and antibiotic eye ointment for the prevention of secondary bacterial infection. For persistent lesions, incision and curettage (i&c), steroid injection may be considered. ^[5] though

the incision and curettage is a main line of the treatment. Injection of 0.2 to 2 mL of triamcinolone 40 mg/mL solution would be a typical choice. Larger lesions may require a repeat injection in 2 to 7 days. Persistent lesions require surgical intervention. ^{[5][6][7]}

Patients and methods

Ethics approval by the institution review board was obtained and the study conducted in civil hospital, Silvassa. The authors declare no financial or proprietary interest.

This was interventional case study conducted in tribal area of Dadra and Nagar Haveli, India. Patient were enrolled from June 2020 to June 2021 for this study. After proper consent, they underwent intralesional TA injection for meibomian cyst. All injections were given by an ophthalmologist as OPD procedure, under all aseptic precautions. 0.2 ml of undiluted TA (40%) was taken in tuberculin syringe and injected intralesionally from skin side. Pressure was applied to stop bleeding, for half an hour. Patients were instructed for hot fomentation and antibiotic ointment application and asked to follow up in OPD after 2 weeks. Data regarding lesion size were recorded at the time of injection and lesion regression or recurrence at the 2-week interval for next 2 follow-ups. Castroviejo calliper was used to measure the size of lesion. Maximum diameter of the chalazion was considered for size measurement. If the lesion recurred or regression was minimal (<50%), 2nd dose 0.2ml were injected as needed. Final size measurement was done at the end of 2 to 3 week of last injection. Patients who refused for 2nd injection were referred for surgical incision and curettage and excluded from study. Success was measured as either complete resolution of lesion or at least an 80% reduction in size from original measurement

RESULTS AND DISCUSSION

Table 1

	Male	Female
Total no.	22	28
Mean age	21	22
Mean size	7mm	8mm

Table 1 Shows the gender distribution of the lesion in our study. We found that females were affected more with meibomian cyst compared to male counter parts but this conclusion was not significant as (p>0.05). Total 28 females (56%) compared to total 22 males (44%) went under treatment. Mean age in male was 21 and in female was 22 years, which indicates no gender preference. The table also shows the mean size of the lesion. Mean size in male were 7mm compare to female which was 8mm which shows no significant difference in average size of Chalazia.

Table 2

On injection	1	2	I&d	Never followed up
Male	14	8	1	0
Female	17	11	2	1
Total	30(60%)	16(32%)	3(6%)	1(2%)

Author observed total 30(60%) patients improved with single dose of intralesionalTA. 20(40%) patients required 2nd dose out of which 3(6%) patient required I&D.

Table 3

Size reduction	>80%	<80%>50%	Failed <50%
Male	19	2	2
Female	24	1	2
Total	43	3	4

Study shows us the higher effectiveness of the intra-lesional TA. Author observed 86% success rate with one or two injections. Only 8% failure cases noted in whole study. No complications of intralesional TA were noted in this study other than ecchymosis at injection site. Higher effectiveness of this treatment is depending on accuracy of injection site and continuation of post injection hot fomentation and antibiotic application. No significant gender distribution was noted. (p>0.05) This suggests high rate of efficacy of this treatment without undergoing painful procedure of incision and drainage and without any complications.

Table 4

size	<5mm	5-8mm	>8mm
No patients	10	29	11
Successive reduction	9	27	7
	90%	93%	63%

Table 5

	PRIMARY	PERSISTENT
Treated	35	15
Size reduction(>80%)	30	12

Author observed size reduction in every lesion with intralesional TA though response in 5 mm and 5-8mm size group was higher compare to size group >8mm. study noted that chances for 2nd dose requirement in >8mm size group was higher compare to <5mm and 5-8mm size group. In both primary and persistent group, successful response was noted in more than 80%.

CONCLUSION:

Intralesional TA is effective in reduction in size, with primary or persistent meibomian cyst with minimal complications. Patients need 1 or 2 injections to achieve good result. Primary, persistent or recurrent meibomian cyst responds well with this treatment regardless of age, sex of the patients. Lesion who fails to respond even after 2 injections is less likely to get benefit from this treatment and should be consider for surgical incision and drainage. Treatment is more suitable for patient who doesn't want to undergo surgical procedure. Procedure is

less time consuming and doesn't need to go through a long learning curve. Easy and effective intralesionalTA can be considered as 1st line treatment for meibomian gland cyst.

As of today though Incision and curettage of the chalazion is the most commonly practised line of management, we consider that it has its own disadvantages as this procedure requires setups and instruments, local injectable anaesthesia, surgical fitness etc. On the other hand, intralesional triamcinolone acetonide injections is more suitable for opd patients, who do not want to go for i&c, children, and patients who are not fit for anaesthesia.

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