

ORIGINAL ARTICLE

Intralesional Triamcinolone Acetonide Injection for ChalazionMohd Ayaz Bhat¹, Waseem Raja², Ambrine Ashraf³**ABSTRACT**

Introduction: Chalazion is a chronic, non-infective granulomatous inflammation of the meibomian gland. They are more common in adults than in children. Treatment modalities include conservative management, intralesional steroid injection and surgical excision. Present study was done to evaluate the safety and efficacy of intralesional triamcinolone acetonide (TA) injection in primary chalazia.

Material and methods: This single-dose, clinical trial was conducted at SKIMS Medical College Hospital at Srinagar from August 2012 to February 2013 in patients with primary chalazion. Fifty eyes of 50 patients with chalazion were selected and a single dose of intralesional injection of 0.1 to 0.2 mL triamcinolone acetonide (40 mg/mL) was given. Data on the lesion size, including digital color photography, lesion regression or recurrence, and complete ophthalmic examination were recorded at the time of injection and after a week or two until resolution.

Results: 80% (40 patients) responded to this treatment with 75% decrease in size after 2 weeks of therapy. Rest 20% which did not respond to this therapy was treated with incision and curettage

Conclusion: Intralesional triamcinolone acetonide injection in primary chalazia is effective in achieving lesion regression. Most cases resolve with an average of 1 to 2 injections. Chalazia that fail to respond are more likely to benefit from surgical excision.

Keywords: Chalazion, triamcinolone acetonide, meibomian gland, topical lignocaine

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INTRODUCTION

A chalazion, or meibomian cyst, is a chronic, sterile, granulomatous, inflammatory lesion caused by retained sebaceous secretion from the meibomian gland into adjacent stroma.¹ The chalazion is distinct from a sty, which arises from an infected hair follicle on the lid margin.

Meibomian secretions, which are fatty in nature, act like an irritant and cause non-infective, granulomatous inflammation of the meibomian gland.^{2,3} Patients with underlying conditions such as rosacea, seborrheic dermatitis blepharitis, or refractive error are more prone to multiple and recurrent chalazia.^{1,4} A chalazion arises as a mild to moderately tender red swelling of the upper or lower eyelid. At various locations and stages, multiple lesions may appear. Clinical onset of a chalazion occurs over weeks, with the redness and tenderness subsiding while the lump remains.

Patients usually present with gradually enlarging painless swelling in the lid and a feeling of mild heaviness. Occasionally a large upper lid chalazion may press on the cornea and cause blurring of vision and astigmatism.^{3,5} Recurrent chalazia must have the curettings sent for histology to exclude sebaceous cell carcinoma. Conservative management is usually beneficial in 40-45% of cases.⁶

Conservative measures include instructing the patient to perform twice daily warm compresses (3-5 minutes) and massage (either with fingers or cotton tips) to assist in the release of the chalazion contents and topical chloramphenicol ointment locally. For persistent lesions, Incision and Curettage (I & C), steroid injection or carbon dioxide laser treatment may be considered.¹ I & C may be associated with surgical risks including pain, bleeding and scarring. Intralesional steroid injection has been reported to be effective for the treatment of chalazia with high success rates. This modality is particularly useful in children and in patients where cooperation for I & C is difficult as the procedure involved is equivalent to the injection of local anaesthesia required for I & C.^{6,8,9}

MATERIAL AND METHODS

This off-label, single-dosing, clinical trial was conducted at SKIMS Medical College Hospital at Srinagar from August 2012 to February 2013 in patients with primary chalazia. All the primary chalazia patients were included in this study. Exclusion criteria was patients with recurrent chalazion, patient with multiple chalazion in same lid, patient having chalazion with other lid abnormalities, infective eye conditions, patients having hypersensitivity reaction to triamcinolone acetonide. A complete eye evaluation was performed for each patient. This included complete torch light examination, slit lamp examination and fundus examination.

Topical anaesthesia (2% lignocaine) eye drops were instilled in the affected eye before the injection. A volume of 0.10 to 0.20 ml of triamcinolone acetonide (TA) (40mg/ml) was injected intraleisionally in the outpatient treatment room. The eyelid was inverted and the TA was injected trans-conjunctivally into the centre of the lesion with a 27G needle.⁶ No patching was required after the procedure. The patients were given chloramphenicol 1% eye ointment three times per day to apply over the lesion and advised to continue warm compresses for 4 to 6 times per day for 5 minutes each. The patients were reviewed after every 2 weeks until the complete resolution of the chalazion. If the chalazia recur, additional injection may be required. When performing the procedure, care was taken to avoid perforation of the globe. There was also the potential for a steroid induced rise in intraocular pressure, so this needed to be monitored and treated with anti-glaucoma medications as appropriate. If the injection is done via a subcutaneous route, localised skin depigmentation can occur. The potential for this is minimised if the procedure is performed via the trans-conjunctival route.⁶

STATISTICAL ANALYSIS

Statistical analysis was carried out with SPSS software 21. Descriptive statistics was used to generate results.

RESULTS

This study was conducted in SKIMS Medical College from August 2012 to February 2013. 50 patients were included in the study in which there were 38 males (76%) and 12 females (24%). The average time to resolution with TA was 2.5 weeks. Complete resolution was achieved in 40 patients (80%) with more than 75% decrease in the size of the lesion. Most of the patients received 1 injection (30 patients; 60%) and 20 patients

(40%) received 2 injections of TA. Out of the 20 patients who received second injection of TA, 10 patients (50%) responded with regression of the lesion. Patients who did not respond to 2 injections were more likely to fail treatment (minimal or no regression) to respond to further injections. There were no complications such as depigmentation, increased intraocular pressure, subcutaneous fat atrophy or any loss of vision in any patient.

DISCUSSION

Chalazia are among the commonly encountered eye problems. In our study, we found that TA injections for primary chalazion result in resolution or near resolution of after an average of 2.5 weeks in more than 80% of the cases. A single injection was sufficient in more than half of the patients and about 20% of cases required a second injection. No adverse effects were attributed to intralesional TA injection and was therefore taken as safe treatment modality for chalazia not responding to conservative treatment. After comparing with previous studies, we found that the success rate for the treatment of primary chalazion with intralesional triamcinolone acetate injection was significant.¹⁰ A study conducted by Ben Simson GJ⁷ found that 81% of patients showed complete resolution with TA injection. Prasad and Gupta⁸ compared subconjunctival total excision with incision, curettage, and intralesional steroid and found a higher success rate with total excision (94%) compared with incision, curettage, and TA injection (75%). An intralesional steroid injection offers the advantage of a quick, simple and less painful procedure with minimum complications and high acceptability especially in younger age groups who are more resistant to incision and curettage.¹⁰ We did not encounter any complication from TA injection. Reported complications are yellow deposits at the site of injection, high IOP and skin hypopigmentation. Among the most serious adverse events, inadvertent globe penetration, traumatic cataract, microembolisation, and infarction of retinal and choroidal vasculature have been documented.^{11,12}

CONCLUSION

Intralesional TA injection in primary chalazia is effective in achieving lesion regression. Chalazia not responding to 2 injections of TA are likely to benefit from surgical excision. It may be considered as a first treatment in cases where diagnosis is straight forward. It is also advantageous in chalazia near lacrimal drainage system. It is also an option in patients allergic to

xylocaine. As it is a simple procedure it can be given by general physicians at primary care center.

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