

## ROLE OF INTRALESIONAL TRIAMCINOLONE ACETONIDE INJECTION IN TREATING CHALAZION: OUR EXPERIENCE

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### HOW TO CITE THIS ARTICLE:

Amar Kanti Chakma, Gautam Mazumder, Debasis Datta, Chandini Reang. "Role of intralesional triamcinolone acetonide injection in treating chalazion: our experience". Journal of Evolution of Medical and Dental Sciences 2013; Vol. 2, Issue 46, November 18; Page: 8886-8890.

**ABSTRACT: OBJECTIVE:** To evaluate the safety and efficacy of intralesional triamcinolone acetonide (TA) injection in primary chalazion. **DESIGN:** Prospective, consecutive case series. **MATERIALS AND METHOD:** A prospective study of sixty six(66) patients with primary chalazion presenting to outpatient clinic of Department of Ophthalmology at Tripura medical college & Dr. B.R. Ambedkar Teaching Hospital, Agartala from 1<sup>st</sup> December 2012 to 30<sup>th</sup> September 2013. All patients received intralesional injection of 0.2ml TA (40mg/ml). Data regarding size including digital colour photography, lesion regression or recurrence, and complete ophthalmic examination, were recorded at the time of injection and at different intervals until resolution or surgical excision. Success was defined as at least 80% decrease in size with no recurrence. If the lesion recurred or regression was minimal (<50%), further injections were given as needed. Patients who did not respond to 3<sup>rd</sup> injections were referred for surgical incision and curettage. **RESULT:** Around 80% decrease in size of the lesion was noted in forty-eight (48) patients after 1<sup>st</sup> injection (72.7%). Twelve (12) patients showed complete resolution of the lesion with 2<sup>nd</sup> injection (18.17%). 3<sup>rd</sup> injection was needed only in two (2) patients for satisfactory outcome. Four (4) patients were referred for incision and curettage that didn't show positive response after 3<sup>rd</sup> injection also. Intraocular pressure and visual acuity remained stable after treatment. One patient developed depigmentation of the skin at the site of injection. No other major complications such as visual loss, subcutaneous fat atrophy were noted with steroid injections. **CONCLUSION:** Intralesional triamcinolone acetonide (TA) injection is a safe, effective and a simple method of treating primary chalazion where diagnosis is straightforward.

**KEYWORDS:** Chalazion, Intralesional triamcinolone acetonide

**INTRODUCTION:** Chalazion is a common eyelid disease caused by plugged meibomian glands and chronic lipogranulomatous inflammation.<sup>1,16</sup> It can affect individuals of all ages and may cause local eye symptoms such as irritation and inflammation and cosmetic disfigurement. Larger lesions can induce mechanical ptosis and corneal astigmatism.<sup>2</sup> It may be self-limited in 25% to 50% of cases and can be cured or improved with medical treatment within 1 to 3 months.<sup>3</sup>

Treatment modalities include conservative methods which is the first line of management in resolving chalazia. In 46% of cases, conservative management has been found to resolve the condition.<sup>17</sup> Conservative measures include eyelid hygiene with warm compress and antibiotic ophthalmic ointment and systemic tetracycline in case with chronic blepharitis or in patients with acne rosacea. Surgical treatments include steroids injections, CO<sub>2</sub> laser treatment, lesion incision and curettage or total excision.<sup>3,4</sup>

Several investigators have studied the effect of intralesional or subcutaneous steroid injection in the treatment of chronic chalazion with reported success and resolution in 50% to 95%

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of the cases. Injection is considered a simple and effective treatment, although serious adverse effects have been reported.<sup>5,6</sup>

The purpose of the present study was to evaluate the safety and efficacy of intralesional triamcinolone acetonide in cases of primary chalazia in 66 consecutive cases.

**MATERIALS AND METHOD:** A prospective study of 66 patients with primary chalazion, in the age group of 10 to 60 presenting to the out-patient clinic of the Department of Ophthalmology at Tripura medical college & Dr. B.R. Ambedkar Teaching Hospital, Agartala from 1<sup>st</sup> December 2012 to 30<sup>th</sup> September 2013. Most the patients had experienced chronic painless mass and had failed to respond to warm compresses and local antibiotics and chalazia had reached stationary size.

After taking proper aseptic precautions and proper fixation of chalazion, inj. Triamcinolone (0.2ml), filled in insulin syringe and fitted with 26G disposable needle, was injected into the lesion through the skin route. Post-operatively, patients were advised hot fomentation 4 times daily; analgesics were given for 2 days and patients followed up at 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup> weeks and then 6<sup>th</sup> month; patients were examined for skin pigmentation and any active complaints on each follow up. Resolution was inferred by disappearance of palpable mass. A repeat injection was administered in cases of considerable swelling at 2<sup>nd</sup> or 3<sup>rd</sup> follow-up.

Failure was considered if swelling persisted at 8<sup>th</sup> weeks.

**RESULT:** From our present study, we found that most of the patients were male (60.60%; table no-1). The incidence was comparatively high in the age group of 10 to 30years which gradually got decreased with increase in age (table no-2).

Sex	Number of patients	Percentage
Male	40	60.60%
Female	26	39.39%
<b>Total</b>	66	100%

Table 1: Sex ratio

Age group(in years)	Number of patients	Percentage
10 to 20	28	42.42%
21 to 30	19	28.79%
31 to 40	11	16.67%
41 to 50	03	4.54%
51 to 60	05	7.58%
<b>Total</b>	66	100%

Table 2: Age distribution

Around 80% decreases in size of the lesion were noted in forty-eight (48) patients after 1<sup>st</sup> injection (72.7%). Twelve (12) patients showed complete resolution with 2<sup>nd</sup> injection (18.17%). 3<sup>rd</sup> injection was needed only in two (2) patients for satisfactory outcome. Four (4) patients were referred for incision and curettage that didn't show positive response after 3<sup>rd</sup> injection also. All the

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patients were followed-up for a period of six months and no recurrence was noted at the end of our study.

Frequency of injections	Number of patients	Percentage
1 <sup>st</sup> injection	48/66	72.7%
2 <sup>nd</sup> injection	12/66	18.17%
3 <sup>rd</sup> injection	2/66	3.03%
Referred for incision and curettage	4/66	6.06%

Table 3: Injections needed to subside the lesion

One patient developed depigmentation of the skin at the site of injection and this may be due to the inhibition of melanosome synthesis, impaired transfer of the melanosome to the keratinocyte, or melanocyte ischaemia. Intraocular pressure and visual acuity remained stable after treatment. No other major complications such as visual loss, subcutaneous fat atrophy, globe perforation, retinal and choroidal vascular occlusion were noted.

**DISCUSSION:** We have found that intralesional TA injection for primary chalazion result in resolution or near resolution in 93.94% of the cases. A single injection was sufficient in more than half of the patients (72.7%). Our finding is in line with earlier studies in which steroid injection resulted in a good success rate in clinical remission.

Pizzarello<sup>7</sup> showed 40% resolution with one injection, 76% resolution with 2 injections and 88% after three injections; 12% failure was observed.

Mohan K<sup>8</sup> achieved 92.3% success in treating chalazia with Triamcinolone; 75% success rate was reported by Prasad<sup>9</sup>. Similar results have been reported by Watson<sup>10</sup>.

A study conducted by Ben Simson GJ<sup>18</sup> found that 81% of the patients showed complete resolution with TA intralesional injection.

The advantages of steroid injection over incision and curettage are:

- 1) It is very quick, cheap and a simple procedure.
- 2) Minimal bleeding occurs and there is no need to apply an eye pad. Bilateral cases can be treated at the same visit. Investigators report that patients experience no greater pain than with a local anaesthetic injection.<sup>11</sup>

Several issues make surgery a less favorable option for many patients, especially in the younger age group; for instance, patients may have substantial psychological fear of surgery as opposed to medical treatment or an injection.<sup>12</sup>

One patient developed skin pigmentation at the site of injection. This complication has been reported in other series<sup>13</sup> and is thought to be caused by inhibition of melanosome synthesis, impaired transfer of the melanosome to the keratinocyte, or melanocyte ischaemia.<sup>14</sup> Patients should be informed of Injections of a steroid agent, however, is not without risk. Potential complication includes atrophy of the dermis and fat, globe perforation, and choroidal vascular occlusion.<sup>15</sup>

**CONCLUSION:** Intralesional triamcinolone acetonide (TA) injection is a safe, effective and a simple method of treating primary chalazion where diagnosis is straightforward.

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## REFERENCES:

1. Perry HD, Serniuk RA. Conservative treatment of chalazia. *Ophthalmology* 1980; 87:218-21.
2. Cosar CB, Rapuano CJ, Cohen EJ, Laibson PR. Chalazion as a cause of decreased vision after LASIK. *Cornea* 2001; 20:890-2.
3. Dua HS, Nilawar DV. Nonsurgical therapy of chalazion. *Am J Ophthalmol* 1982; 94:424-5.
4. Pizzarello LD, Jakobiec FA, Hofeldt AJ, et al. Intralesional corticosteroid therapy of chalazia. *Am J Ophthalmol* 1978; 85: 818-21.
5. Thomas EL, Laborde RP. Retinal and choroidal vascular occlusion following intralesional corticosteroid injection of a chalazion. *Ophthalmology* 1986; 93:405-7.
6. Hosal BM, Zilelioglu G. Ocular complication of intralesional corticosteroid injection of a chalazion. *Eur J Ophthalmol* 2003; 13:798-9.
7. Hofeldt AJ, Pizzarella LD, Jakobiec FA, Podolsky MM, Silvers DN. Intralesional corticosteroid therapy of chalazion. *Acta Ophthalmol. (Copenh)*. 1983; 61:938-42.
8. Dhir SP, Mohan K, Munjal VP, Jain IS. The use of intralesional steroids in the treatment of chalazion. *Acta Ophthalm. Copenh*. 1983;61:933-7
9. Gupta AK, Prasad S. Sub conjunctival total excision in the treatment of chronic chalazia. *Ophthalmol*.1986;93:405-7
10. Austin DI, Watson AP. Treatment of chalazion with injection of a steroid suspension. *Vestn oftamol* 1989; 105:54-5.
11. Mohan K, Dhir SP, Munjal VP, Jain IS. The use of intralesional steroids in the treatment of chalazion. *Ann Ophthalmol* 1986; 18:158-160.
12. Li RT, Lai JS, Ng JS, et al. Efficacy of lignocaine 2%gel in chalazion surgery. *Br J. Ophthalmol* 2003;87:157-9.
13. Cohen BZ, Tripathi RC. Eyelid depigmentation after intralesional injection of a fluorinated corticosteroid for chalazion. *Am J Ophthalmol* 1979; 88:269-270.
14. Kligman AM, Willis I.A new formula for depigmenting human skin. *Arch Dermatol* 1975; 111:40-8.
15. Thomas EL, Laborde RP. Retinal and choroidal vascular occlusion following intralesional corticosteroid injection of a chalazion. *Ophthalmology* 1986; 93:405-7.
16. Dhaliwal U, Arora VK, Singh N, Bhatia A. Cytopathology of chalazia. *Diagn Cytopathol* 2004; 31:118.
17. Goawalla A, Lee V. A prospective randomized treatment study comparing three treatment options for chalazia. *Clin Experiment Ophthalmol* 2007; 35:706-12.
18. Ben Simon GJ, Rosen N, Rosner M, Spierer A. Intralesional TA injection versus curettage for primary chalazia. *Am J Ophthalmol*. 2011 Apr; 151(4):714-718.e1.Epub 2011 Jan 22.

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Date of Submission: 24/10/2013.

Date of Peer Review: 28/10/2013.

Date of Acceptance: 06/11/2013.

Date of Publishing: 12/11/2013