

Comparison of Intralesional Triamcinolone Acetonide Injection and Incision & curettage in Management of Chalazion

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Article Details

ABSTRACT

Keywords: Chalazion, Incision Curretage, Objective: To investigate the efficacy of incision and cure versus intralesional Triamcinolone

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Resident ophthalmology, Bahawal Victoria all procedures. In intralesional triamcinolone injection, 0.1- 0.2 ml, TA (40mg/ml) Hospital Bahawalpur.

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Material & Methods: Total 248 instances of Chalazion (124 cases in each group) was taken as per inclusion Criteria. Group A undergone intralesional triamcinolone injection and group B went through Incision& Curettage procedures. A single surgeon did Topical Anaesthesia. During the lignocaine sensitivity examination which involved infiltrating the eyelid with 2% lignocaine utilizing a 26-gauge syringe and a 2cc syringe, I&C was executed under sterile settings. Results: Total male patients enrolled in study were 74 with mean age of 24 ± 14 SD. Female patients were 50 with mean age of 28 ± 14 SD. Similarly in group B 58 patients male mean age of 22 ± 14 SD. Females were 66 with mean age of 26 ± 14 . Success rate of both the procedure was found more or less 0.446 which was statistically insignificant. Thus, it proved that intralesional injection of triamcinolone Acetonide is just as efficient at resolving chalazion as incisional curretage. Conclusion: Intralesional triamcinolone is effective Incision & curretage in resolution of chalazion. Those who do not want to undergo surgical intervention for chalazion can still get benefits from intralesional triamcinolone

INTRODUCTION

Chalazion is most common eyelid lesion affecting 0.57% population worldwide. It is sterile, chronic granulomatous infection of blocked meibomian gland, or sometimes Zeis¹. Sometimes it is asymptomatic and resolved by conservative treatment, lid hygiene, warm compresses, antibiotic and steroid drops².

Persistent and recurrent cases often necessitate more definitive treatment to alleviate symptoms, restore normal eyelid function, and prevent long-term complications³. Incision & Curettage and intralesional steroid injection are commonly used interventions for managing large chalazion. Every approach has its own challenges and benefits, directing ongoing debate for their relative efficacy, safety and outcomes in clinical practice⁴.

In an effort to curate the contents, a vertical incision is made on the inside of the eyelid. The cystic walls are then scraped to stop this from happening again. This is highly effective for large or long-standing chalazia providing immediate decompression and elimination of the inflammatory material⁵.

Intralesional steroid is a minimally invasive procedure involving the direct administration of corticosteroid into the lesion. Intralesional steroid injection is used for small, marginal lesions and or lesions having structures like lacrimal punctum due to danger of the surgical damage. It has similar resolution to incision & curettage⁶. However, its outcome is variable, specifically recurrent chalazia.

Both treatments are effective, while Incision & Curettage offers advantages in terms of higher success rate and lower recurrence, intralesional steroid injection is a less invasive procedure making it quicker for patients preferring non-surgical options⁷. Patient preference, lesion characteristics (size, location) and potential complications should guide treatment choice. The treatment mainly depends upon the availability and possibility of expertise and resources⁸. Incision & Curettage may involve a special type of instrument with a sterile environment, but intralesional steroid injections are possible to be performed in the outpatient settings.

METHODOLOGY

The study was evaluated at Bahawal Victoria Hospital (Bahawalpur) in the ophthalmology department. Total 248 cases of Chalazion (124 cases in each group) were taken as per inclusion criteria. Sample Size: was calculated taking the outcome as complete Chalazion resolution, according to study done by Rehman et al. (2018), 73% was assumed for Incision and curettage and 58% for triamcinolone injection, sample

size of 248 was calculated With 124 patients in each group keeping confidence interval of 95% with margin of error 5% and power of the test as 0.8. Prior informed consent will be obtained, and the procedure will be explained to all cases meeting inclusion criteria.

INCLUSION CRITERIA

1:Patients were aged 10 -65 years of either male or female. 2:Patients have had Chalazion on the upper or lower eyelid for 18 months.

EXCLUSION CRITERIA

1:Those having sty assessed by history and Slit lamp examination. 2:All the patients having blepharitis were assessed by history and slit lamp Examination. 3:Those having history of recurrent chalazia. 4:All the patients who were having history of Trauma to the eyelid or globe.

Their demographical information like name, age, gender were noted of those patients who were victim of inclusion criteria. Patients were alienated into groups (A and B) by lottery method.

Group A underwent intralesional triamcinolone injection and group B went through incision & Curettage procedures. A single surgeon did all procedures. In intralesional triamcinolone injection, 0.1 to 0.2 mL TA (40mg/ml) was injected into the Chalazion by everting the lid under aseptic measures Using Topical Anaesthesia. I&C was performed under strict sterile conditions just after Lignocaine sensitivity testing, and eyelid was permeated with just (2%) lignocaine via needle (26 gauge) and also 2cc syringe. Then, Chalazion Clamp was pragmatic and all material curetted via single vertical incision. The Chalazion wall was carefully scraped, and then material referred for histopathology. Patients were called for follow-up at one week, and after every week for up to 3 weeks. The Patients were checked for resolution of Chalazion and skin depigmentation.

To analyse the data, Statistical Package for Social Sciences (SPSS) Version 26 was used. Quantitative variables summarized as (mean \pm SD) While Qualitative variables as percentage and frequency. The association was done via Chi-square. A mean variation in groups was found via applying the autonomous sample (T-test). A set p-value (≤ 0.05) was taken statistically significant.

RESULTS

In this study total 248 patients were taken to check whether intralesional triamcinolone is effective or Incision and curettage provide better results. Out of these 124 patients were considered in single (group A) and 124 patients were named (group B). Total male patients enrolled in study were 74 with mean age of 24 ± 14 SD. Female patients were 50 with mean age of 28 ± 14 SD. Similarly in

group B male patients were 58 with age 22 ± 14 SD. Females were 66 with mean age of 26 ± 14 SD. Overall, the presence of chalazion on the upper lid 88 (70.96%) was greater as compared to lower lid 36 (29.03%), ($p < 0.0001$) in total evaluated samples. While upper lid Chalazion in group A were 85 (68%) was known greater than lower lid 39 (32%). Likewise, in group-B, the upper lid Chalazion 82 (66%) was more than the lower lid 42 (33%). The average size of chalazion in A group was 3.74 ± 1.3 mm while in group B (4.2 ± 1.5 mm) with $P \approx 0.0105$. Following up after the period of 3 weeks, Complete firmness of this lid chalazion was found little bit higher in In I/C group as compared to TA-group. However after second dose it was observe almost identical situation.

TABLE:1 SHOWING COMPARISON OF MEAN RESOLUTION PERIODS(IN WEEKS) BETWEEN TWO GROUPS

	Group A(TA-group)	Group B(I/C group)	P-value
Mean resolution period of chalazion (in weeks)	2.2 ± 0.7	1.2 ± 0.9	<0.001

TABLE:2 FREQUENCY OF RESOLUTION OF CHALAZION AFTER 3 WEEKS OF INTERVENTION

	Group A	Group B	P-value
Frequency of Resolution after three weeks	87(70.17%) 37(29.87%)	97(78.22%) 27(21.77%)	0.446

Total 12 patients in TA-group showed complications. Out of these 9 (75%) showed skin depigmentation while 3(25%) revealed sub-conjunctival hemorrhage.

In group B, Total 24 patients developed complications. Out of these 14 (58.33%) suffered from sub-conjunctival hemorrhage. 6(25%) had lid notching and 4 (16.66%) developed glaucoma.

The rate of success of procedure was determined by the resolution time and need for repetition of procedure having more than 80% resolution or having complete resolution of lesion. Success rate of both the procedure was found more or less 0.446 which was statistically insignificant. Hence proved that intralesional triamcinolone Acetonide injection is as effective as Incision curettage in resolution of chalazion.

DISCUSSION

This study highlighted the importance of triamcinolone Acetonide injection in resolving the Chalazion. Our study showed that Triamcinolone Acetonide injection is as effective as Incision & Curettage in

Management of Chalazion. This saves the patients to undergo surgical intervention. In Our study lesions were more abundant in upper lid as compared to lower lid possible cause explained by Bhattarai et al⁹, is due to the anatomical location of the meibomian glands in the upper lid predisposing to more retention of sebum due to different other secondary causes.

The overall effectiveness of Both procedures were almost equal. Success rate of procedure in Triamcinolone Acetonide group was 91% , while in Incision &Curretage group this was 96%. These results are supported with the study done by Tahir et.al ¹⁰,In his study effectiveness of Intralesional triamcinolone Acetonide injection was highlighted for Chalazion who was having size of 2mm to 11mm but was more effective in Chalazion who were having size of less than 6mm. Another study by Nabie R et.al ¹¹, in which comparison of Intralesional triamcinolone Acetonide injection and Incision &Curretage in treatment of chronic chalazion was done. This study showed equal effectiveness of both similar results as our study.

In our study Although the difference between two groups was statistically not significant, However, success rate of Incision&curretagein treating chalazion was more as compared to Intralesional triamcinolone Acetonide injection.

Triamcinolone Acetonide injection have fewer complications as have been mentioned in literature. Even though I&C is more reliable regarding success rate, intralesional Steroid injection has the benefits of not requiring Additional anaesthetic injection and having prolonged Anti-inflammatory affects, does not cause bleeding and Scarring, can be easily performed in the clinic setting, is Helpful for multiple chalazia. Potential complications Highlighted in literature for intralesional TA injections Include discolouration at the injection site, consistent With our study results. Elevated IOP, globe perforation, and traumatic cataracts may happen in TA injection, but our patients did not show any rise in IOP Post-treatment.

CONCLUSION

This Randomized control trial study concluded that for small chalazion intralesional triamcinolone is as effective and safe as Incision and curretage. Those who do not want to undergo surgical intervention for chalazion can still get benefits from intralesional triamcinolone. This procedure provides as an alternate and easy tool to get ride from lid chalzion with minimal complications.

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