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Study of Jones procedure for senile entropion

KEYWORDS: Senile entropion, jone's procedure, lid laxity

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ABSTRACT : *Involutional(senile) entropion is an inward rotation of the eyelid margin because of increased horizontal lid laxity, an overriding preseptal orbicularis, atrophied lid retractors, and involutional enophthalmos. this finally leads to impaired optical function of the ocular surface through chronic irritation of the conjunctiva and cornea as a result of persistent entropion and trichiasis. Conservative forms of therapy mostly provide only a temporary solution and are generally used in preoperative care or if surgical intervention is unfeasible. The aim of this study is to consider the merits of a selection of standard method (Jones's Procedure) for the correction of lower lid entropion by describing their indication, technique and key points.*

INTRODUCTION-

Senile entropion (Involutional Entropion) is a general instability of the lid structures with age. Due to disparity in the length and tone of the anterior laminae (skin and muscle) and posterior laminae (tarsoconjunctival). Predisposing factors here are the weakness of the Inferior lid retractors, laxity of the medial and lateral canthal ligaments and atrophy of the orbital fat. Early intervention is required in such cases due to Tear film instability, Conjunctival scarring, Reccurent corneal abrasions, Corneal ulceration, Superficial corneal opacities and vascularization as these are potentially blinding condition.

The objective of this study is to evaluate the safety and efficacy of Jones procedure as a method of treatment of senile entropion.

Materials and methods-

A Prospective interventional study approved by the ethics committee was carried out in department of ophthalmology of government medical college nanded from january 2013 to december 2014. A sum total of 54 patients between age of 50 to 81 years where diagnosed with senile entropion and were treated with jones procedure. The follow-up after surgery continued for at least 6 months. Out of this 54 cases 3 of them lost follow up and were removed from the study.

INCLUSION CRITERIA-

Those with isolated senile entropion, spastic entropion and those with recurrence of entropion.

EXCLUSION CRITERIA-

Those with other types of entropion like cicatrical, congenital entropion, upper lid entropion, those not willing for surgery and who did not follow up.

A detailed evaluation of eyelids as to the resting position of the lower lid in primary gaze, whether there is increased depth of the inferior fornix and the lack of downward movement of lower lid on down gaze was taken into consideration.

Procedure-

A written and informed consent of all the patients was taken. Local infiltration of 2% lignocaine with 1:2,00,000 adrenaline was given through a skin pinch over the lower lid under aseptic precautions. After giving local anesthesia a horizontal skin incision is made 5 mm below the eyelash line lateral to medially till the junction of medial 1/3rd and lateral 2/3rd, and the orbicularis under the skin is exposed. With proper hemostasis achieved identification of the lid retractors is done after raising a skin muscle flap and inferiorly retracting the pre-aponeurotic fat. After this a 4-0 silk suture is passed through firstly the skin, the lower orbicularis muscle, the inferior lid retractor, the superior orbicularis muscle and back through the skin of the upper half of the incision. Adjustment of the suture was done in order to avoid any over or under correction. Similar sutures were passed medial and lateral to the initial central suture. After hemostasis is achieved the skin sutures were taken with the same 4-0 silk sutures which were removed after 14 days under aseptic precautions.

Post surgery patients were assessed at 48 hours,2 weeks(suture removal) and monthly thereafter up to 6 months. The palpebral fissure height ,symmetry between corrected and contralateral lid and suture sites were examined each follow up.

Results-

Table 1- Age distribution

	Male	Female
50-60 years	4	3
61-70 years	13	16
71-80 years	8	6
81-90 years	1	0
Total	26	25

There were no intra operative complication. However post operatively a single patient had mild wound infection which was due to poor hygiene and later on was cured with simple antibiotic administration. There were no cases with recordable over or under correction and not even a single case showing any recurrence showing the efficacy of the procedure.

Discussion-

Involutional entropion is one of the most commonly encountered eyelid malpositions. Several aetiological factors are thought to be important in the development of invo-

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lutional entropion and these include: (a) horizontal lid laxity, caused by stretching of the canthal tendons and/or the tarsal plate; (b) vertical lid laxity, caused by attenuation, dehiscence, or disinsertion of the lower lid retractors and/or the orbital septum; (c) migration of the preseptal orbicularis muscle to override the pretarsal orbicularis muscle and (d) appositional pressure of the lids during eyelid closure. . Various medical treatments including skin patches, botulinum toxin, and tissue glue have been advocated which could provide only with temporary subsidence of symptoms hence surgical intervention is the only successful treatment option of this condition.

The Jones procedure tightens the capsule palpebral fascia by plication of the lower lid retractors, thus reinforcing the vertical traction power of the lower-lid ligaments. Everting sutures plicate the attenuated lid retractors and transfer their pull to the anterior surface of the tarsal plate. They also create a horizontal barrier to the upward migration of the preseptal orbicularis. The permanence of the procedure depends on the creation of a fibrotic scar along the suture tracks. Seiffet al demonstrated an aggressive fibrotic and inflammatory response in the tissues of the lower lid 2 weeks after the insertion of everting sutures. There was no recurrence in cases who had undergone jones procedure. Neither the age nor the sex of the patients influenced the outcome.

Conclusion-

The use of Jones procedure in patients with Senile lower lid entropion is a safe,effective and economically viable option. This procedure requires small skin incisions and relatively less surgical time, easy surgical skills to master, with no intra operative complication, with almost negligible chances of recurrence as per our study and at the same time providing good cosmesis.

Figure 1- Showing the incision site 5mm from the lower lid margin and from below the lateral canthus till the junction of lateral 2/3rd and medial 1/3rd

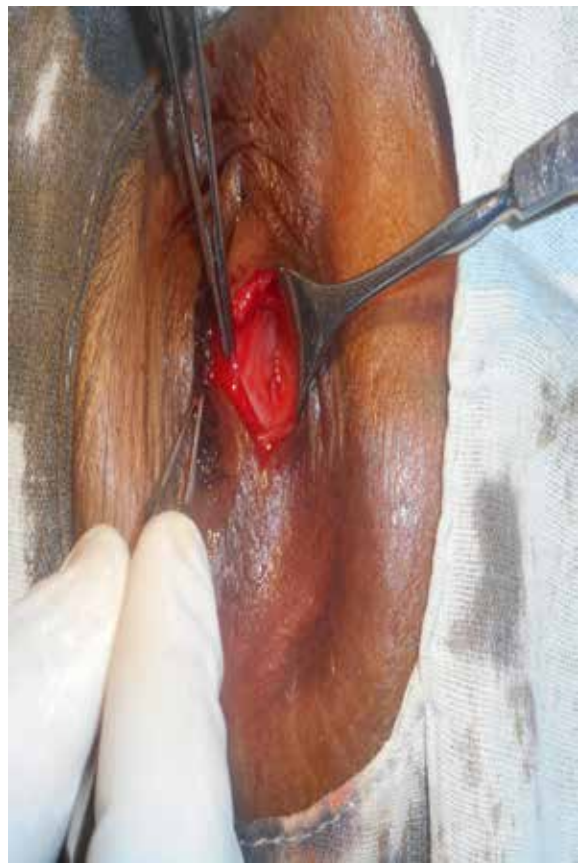

Figure 2- Showing the inferior lid retractor identified as shining structure seen after inferior retraction of the aponeurotic fat.

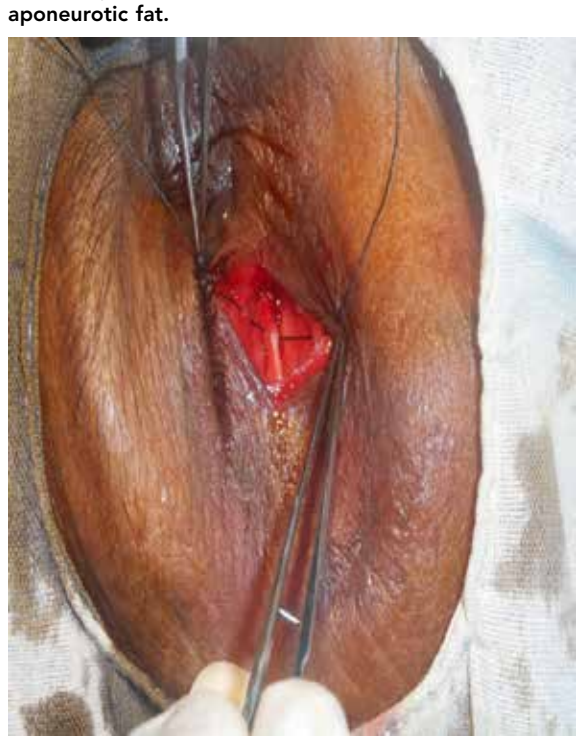

Figure 3- Showing the sutures being passed through the skin, orbicularis muscle, lid retractor

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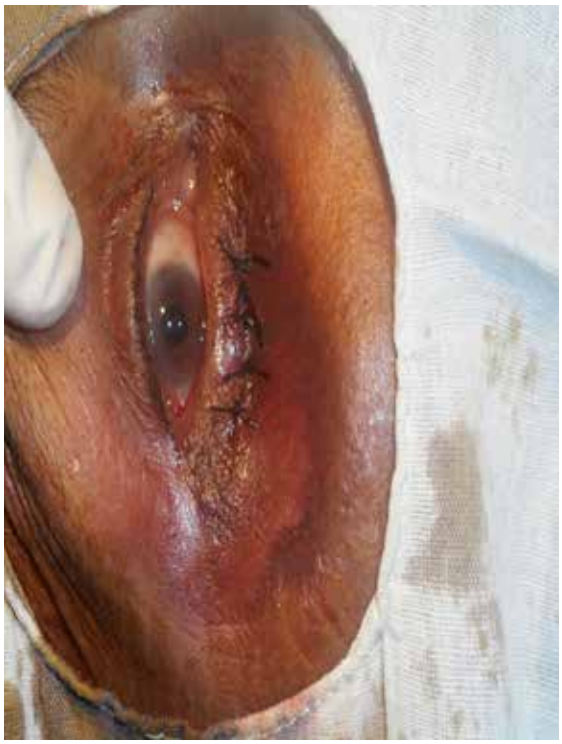

Figure 4- Showing immediate post-operative appearance after closure of the wound.

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