JMSCR Vol||05||Issue||10||Page 29347-29351||October 2017

www.jmscr.igmpublication.org
Impact Factor 5.84
Index Copernicus Value: 71.58
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v5i10.150

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Original Research Article

A Study on Clinical Evaluation of Ectropion

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Abstract
Out word rolling of the lower eyelid away from the eye, exposing the surface of the inner eyelid, is called ectropion. This condition can cause eye dryness, excessive tearing, burning and irritation. The primary cause of ectropion is the muscle weakness or tissue relaxation that occurs as part of the normal aging process. The risk of developing ectropion increases with age. 11 cases of ectropion were studied having complains of watering, congetion. All the cases were surgically managed. Following surgery the position of lid came back to its normal position. Watering and congetion were relieved.
Keywords: *Ectropion, bells palsy, involutional, cicatrical, z-plasty, transposition, exposer keratitis, palpabral conjunctiva, lid margin, keratinisation.*

Introduction

When the lower eyelid turns or sags outward, away from the eye, exposing the surface of the inner eyelid, the condition is called ectropion. This condition can cause eye dryness, excessive tearing, and irritation. Ectropion may be due to several factors. Commonest of all is senility. Facial paralysis and injury can also contribute to ectropion. Muscle relaxation due to aging is the cause of senile ectropion. Without treatment, ectropion can lead to serious problems with the cornea and even blindness. Eye lubricants can help ease symptoms, but surgery is usually necessary to achieve full correction.[1]

The primary cause of ectropion is the muscle weakness or tissue relaxation that occurs as part of the normal aging process. The risk of developing ectropion increases with age. Other triggers include:

Stroke, skin cancer, injury, scar tissue from injuries or burns, growths on the eyelid (either cancerous or benign), birth defects (due to genetic disorders such as Down syndrome), Bell's palsy (a condition that damages the nerve that controls facial muscles) or other types of facial paralysis, prior surgery or radiation treatment of the eyelids, rapid and significant weight loss. [2]

Material and Method

A study was conducted in MKCG Medical college from January 2016 to December 2016. 11 cases of ectropion were examined. Complete assessment of

patient including age, sex, domicile of India, past ocular medical and surgical history was taken. The eyelids were examined in detail. The position of both the eyelids were noted. Amout of evertion of lower eyelid was noted. The exposed palpabral conjunctiva was examined. Wheather there was any follicle, papilla, or keratinisation, hyperemia was noted. Position of punctum was noticed. Evertion of lower punctum was seen. Fornix was examined. In the lower lid the condition of fornix was noted.

Antibiotic e/d and carboxymethyl cellulose e/d was given. Surgical correction was done in all the cases. For involutional ectropion and cicatrical ectropion the surgical procedures were different. For mild ectropion horizontal lid shortening was enough. For severe degree of ectropion horizontal lid shortening and blepharoplasty was done. For cicatrical ectropion z plasty was done.

Procedure of horizontal lid shortening for involutional ectropion – an incision was made through the lower lid margin to the lower border of the tarsus in the area of maximum lid laxity. 5 mm from the lateral canthus if the ectropion is generalized. The medial and lateral portions of the lid were overlapped to asses how much must be resected to compensate for excess horizontal lid laxity. This portion was resected from the medial portion of the lid and the excision was completed as a full thickness pentagon. A direct closure of full thickness lid defect was done.

Horizontal lid shortening and blepharoplasty was done for generalized horizontal lid laxity with excess skin. A subcilliary incision was made 1 to 2 mm below the lashes from inferior punctum to the lateral canthus and then followed the skin creese down words and laterally for about 8mms. The skin flap was undermined from the orbicularis muscles. The lid margin was cut through and a pentagon of lid tissue was removed under the skin flap. The pentagonal lid defect was repaired. The blepharoplasty flap was laid across the reconstructed lid and excess skin was excised as a base up lateral triangle.

Procedure for cicatrical ectropion - two flaps of skin are transposed. This increases the strength of the skin in the line of the scar contraction at the expense of shortening the skin at right angle to it. It alters the line of the scar. The line of the scar was marked. From each end mark another line the same length mark another line the same length as the scar line, but running 60 degree to it, making a z shape. The skin flap were cut and the deep scar tissue was excised. The flaps were transposed and sutured. Two 4-0 traction sutures were put through the lid margin in the line of the original scar and was kept for 48 hours postoperatively.

Lid margin was involved in the scar in one case. Here the notch was excised and repaired first then z plasty undertaken.

Observation

11 cases were examined

Age of occurence

Age of occurrence	Number of cases
Less than 40	2
More then 40	9

Types of ectropion

Type of ectropion	Number of cases
involutional	9
cicatrical	2

Presenting features

Presenting features	Number of cases
Watering	10
Congestion of conjunctiva	8
Irriation	5
Burning	4

Other systemic associations

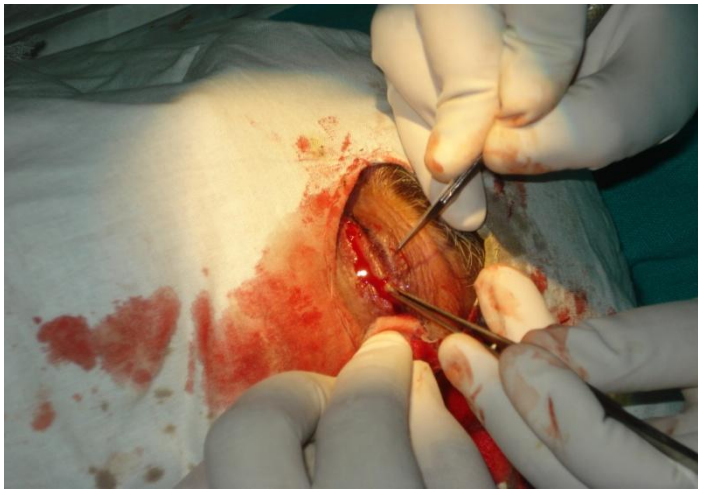
Systemic conditions	Number of cases
osteomylitis	2
tuberculosis	1
spondylolysthesis	2
diabetes	3
hypertension	3
No systemic association	3

Post operatively improvement of symptoms

Improvement of symptoms	No.of cases
watering	10
congetion	8

Following surgery there was improvement in symptoms in all the cases. The lid margin were back to its normal position and was well apposed to the globe. Drainage of tear fluid was perfect. The palpabral conjunctiva regained its healthy appearance.

Involutional ectropion



Steps of surgery - 2

Post operatively

Cicatrical ectropion

Discussion

Correcting entropion and ectropion successfully requires knowledge of the abnormalities that cause these types of eyelid problems. Typically, instability of the eyelid is caused by either horizontal laxity at the lateral canthus (or occasionally the medial canthus) or disinsertion or attenuation of the lower eyelid retractors to the inferior tarsal border. Surgery to correct these malpositions of the lower lid must address the underlying anatomic factors responsible for the malposition [3]. So surgical procedures should be directed at correcting the horizontal and vertical instability of the lid by medial and lateral canthal tendon stabilization[4], tarsal strip procedure or other horizontal lid shortening procedures, everting or inverting sutures, plication or reinsertion of the lower lid retractors, tumor excision, or combined techniques [5,6]. Learning and understanding these conditions and factors which cause lid instability and their management will lead to selecting the proper procedure and most importantly, a successful outcome for the patient [7].

For minimum ectropion of various types different methods are available.

Lateral Tarsal Strip

A horizontal lower eyelid tightening procedure is often used when correcting ectropion. As lateral canthal tendon laxity is the primary problem in the

majority of lax eyelids, the lateral tarsal strip (LTS), a procedure in which the lateral canthal tendon is tightened, is a well-recognised means for correcting paralytic or involutional upper and lower eyelid laxity, and lateral canthal tendon laxity or malposition.[8]

A medial spindle procedure is often performed in combination with the LTS in order to minimise any element of medial lid eversion and punctual malposition. Although there are clear theoretical benefits of adding a medial spindle, including the recruitment of the inferior canaliculus for tear drainage with surgical correction of punctal malposition, there has been no published literature confirming this theoretical advantage in practice or guiding the case selection for this adjunctive procedure.[9]

Where the lateral pinch and twist test returns the eyelid to a good position, the LTS alone can suffice for the management of involutional ectropion.

Wedge Resection

This minimally invasive single-stitch lateral wedge technique is a simple and effective procedure for repairing involutional lower eyelid ectropion and is associated with low recurrence and complication rates.

Medial canthal tendon (MCT) laxity is a common condition, usually age related and often causing symptoms of epiphora, discharge, irritation, and redness. MCT repair is more complicated than that of its lateral counterpart because of the intimate relation with the canaliculus. The position and patency of the canaliculus can be affected by any surgery to the canaliculus. Because of the problems with surgical repair, surgery is often delayed until the MCT laxity is advanced.[10]

For paralytic ectropion lateral periosteal flap canthoplasty was preferred method.[11]

Conclusion

Ectropion is a common condition. Out of the various types of ectropion involutional ectropion is most common. depending on the extent of ectropion various modalities of surgery are available. Cicatrical ectropion is relatively rare. Z plasty is effective type of surgery for cicatrical ectropion. Then the cicatrix involves the lid margin, excision of the notch first, followed by z plasty is helpful. Surgery is an effective mode of treatment for ectropion. Result of surgery is satisfactory in all the cases.

Acknowledgement

Special thanks to Mr. Gyandeep Sarangi for his assistance in preparing this manuscript.

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