Analysis of entropion recurrence post surgery: Lateral tarsal strip with everting sutures versus lateral wedge with transcutaneous inferior retractor plication

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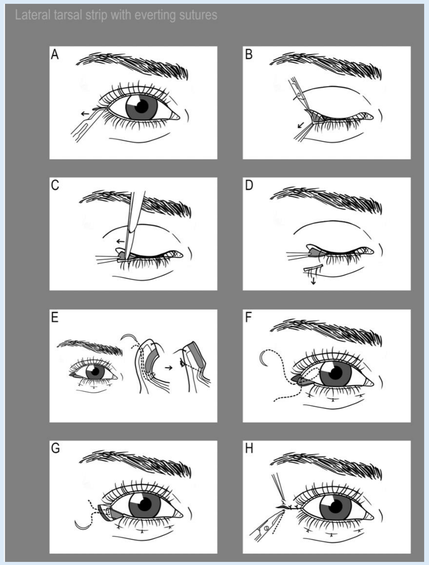
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Introduction

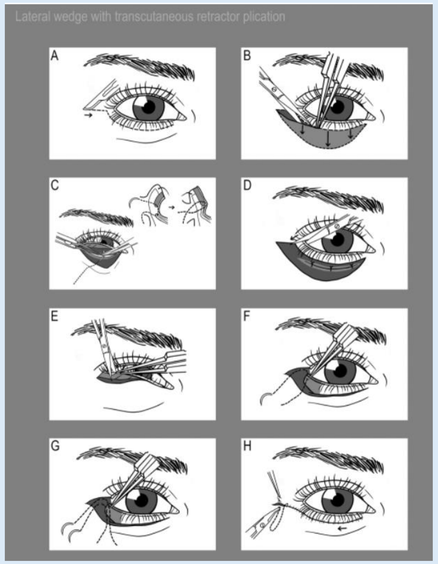
- Retrospective cohort study to compare the rate of recurrence of entropion requiring re-operation after surgical intervention by either lateral tarsal strip with everting sutures (LTS-ES) or lateral wedge resection with transcutaneous retractor plication (LW-TRP)
- Secondary aims: investigate other factors which may contribute to recurrence of entropion requiring re-operation
- Various surgical procedures have been used to correct vertical and horizontal lid laxities [1,2,3,4,5]
- However, in current literature, it is unclear which procedure has the lower rate of recurrence of entropion
- This study compares two methods of combination surgeries correcting both horizontal and vertical lid laxities.

Methods

- Data was collected from digital and physical patient records for patients who underwent entropion correction between January 2018 and January 2020 at James Cook University Hospital, Middlesbrough, United Kingdom
- Data analysis was performed using R
- This study was approved by the James Cook University Hospital audit committee



Lateral tarsal strip with everting sutures
A: Lateral canthotomy is created
B: The anterior and posterior lamellars are separated to expose the inferior canthal tendon
C: Inferior cantholysis is performed
D: The lid margin over the lateral tarsal strip is excised
E: Three everting sutures in the lower lid (double-ended 6-0 vicryl)
F: 5-0 vicryl is applied to the end of the lateral tarsal strip
G: The lateral tarsal strip is secured to the lateral orbital rim periosteum
H: Skin closure with interrupted sutures using 6-0 vicryl



Lateral wedge with transcutaneous retractor plication
A: 2 mm subciliary incision is created
B: Lower lid retractors are exposed
C: The lower lid retractors are plicated to the lower edge of tarsus using three 6-0 vicryl sutures
D: A full thickness incision is created at lateral end of the lower lid
E: The full thickness wedge of the eyelid is done
F: 6-0 vicryl sutures are placed at the lateral end of the cut tarsus
G: The 6-0 vicryl sutures is secured to the thickening of the lateral canthal tendon
H: Skin is closed with continuous 7-0 vicryl suture

Results

- A total of 260 entropion operations were included (n= 221) patients
- 109 males (49.3%) and 112 females (50.7%)
- 201 unilateral, and 59 bilateral surgeries
- The mean age was 77.3 ± 9.2 years
- Recurrence occurred in four patients in each group of LW-TRP (4.2%) and LTS-ES (4.2%), with no difference in recurrence rate (p=0.9)
- Smoking was found to be significantly associated with recurrence of entropion requiring re-operation (p=0.047)
- When smokers and ex-smokers were included together versus non-smokers, the recurrence of entropion needing re-operation was not found to be significant (p=0.1)
- Other factors including diabetes mellitus, anticoagulation and antiplatelet medications, previous entropion and cataract surgeries were not found to be statistically significant

Conclusion

- No difference in the rate of entropion recurrence requiring reoperation between LTS-ES and LW-TRP
- An association was found between smoking status with recurrence requiring reoperation after surgical repair
- With smoking cessation, this association appeared to be reversible

References

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