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Long-Term Outcomes of the Wies/Quickert Procedure with Horizontal Eyelid Shortening Versus Lateral Tarsal Strip with Everting Sutures for Involutional Entropion: A Retrospective Study

Agnieszka Jaszczuk

AJ Clinic, Gdańsk, Poland

ABSTRACT

Background: Involutional entropion is a common eyelid malposition in elderly patients and is associated with horizontal and vertical eyelid laxity. Several surgical techniques are available; however, data directly comparing their long-term outcomes are limited.

Objective: To evaluate and compare long-term recurrence rates following the Wies/Quickert procedure with horizontal eyelid shortening and the Lateral Tarsal Strip (LTS) procedure combined with everting sutures.

Methods: A retrospective analysis was conducted of patients treated for involutional lower eyelid entropion between 2010 and 2021. Group 1 included eyes treated with the Wies/Quickert procedure combined with horizontal eyelid shortening. Group 2 included eyes treated with LTS and everting sutures. Both primary and revision cases were included. Follow-up was performed at 6, 12, and 36 months in both groups, with extended follow-up to 60 months in Group 1.

Results: A total of 169 eyes were included (102 in Group 1, 67 in Group 2). Group 1 demonstrated no recurrences at 6, 12, or 36 months. One late recurrence (0.98%) was observed beyond 60 months. Group 2 showed no recurrences at 6 months, one recurrence (1.49%) at 12 months, and one recurrence (1.49%) at 36 months, resulting in a total recurrence rate of 2.98%.

Conclusion: Both surgical techniques provide effective correction of involutional entropion with low recurrence rates. The Wies/Quickert procedure combined with horizontal eyelid shortening demonstrated excellent long-term anatomical stability, suggesting potential superiority in patients with combined horizontal and vertical eyelid laxity.

***Corresponding author**
Agnieszka Jaszczuk, AJ Clinic, Gdańsk, Poland.

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Introduction

Involutional entropion is a common eyelid malposition in elderly patients, characterized by inward rotation of the lower eyelid margin [1-7]. The condition is multifactorial, most commonly resulting from horizontal eyelid laxity, vertical retractors attenuation, and preseptal orbicularis muscle override [7]. If untreated, involutional entropion may cause persistent ocular irritation, corneal epithelial defects, infection, and vision-threatening complications [8-10].

A variety of surgical techniques have been developed to address these anatomical abnormalities [2,3]. Among the most widely used are the Wies/Quickert procedure and the Lateral Tarsal Strip (LTS) procedure, often combined with everting sutures [5]. Although both techniques are considered effective, direct comparisons of their long-term outcomes-particularly regarding late recurrence-remain limited [8-10]. This study aims to evaluate and compare the recurrence rates of these two surgical approaches over time.

Materials and Methods

Study Design

This was a retrospective review of patients who underwent surgical correction for involutional lower eyelid entropion between 2010 and 2021.

Patient Population

A total of 169 Eyes were Included and assigned to Two Treatment Groups

- **Group 1:** 102 eyes treated with the Wies/Quickert procedure combined with horizontal eyelid shortening [2,3]
- **Group 2:** 67 eyes treated with lateral tarsal strip (LTS) and everting sutures [5]

Both primary and revision cases were included in the analysis.

Follow-Up and Outcome Measures

Postoperative follow-up examinations were conducted at 6, 12, and 36 months in both groups. Group 1 also underwent extended follow-up up to 60 months. The primary outcome measure was recurrence of entropion at each follow-up interval.

Results

Wies/Quickert Procedure With Horizontal Eyelid Shortening (Group 1)

No recurrences were observed at 6, 12, or 36 months postoperatively. Among patients with extended follow-up beyond 60 months, one late recurrence was identified, corresponding to a recurrence rate of 0.98%.

Lateral Tarsal Strip With Everting Sutures (Group 2)

No recurrence occurred at 6 months. One recurrence (1.49%) was observed at 12 months, and an additional recurrence (1.49%) occurred at 36 months, resulting in a cumulative recurrence rate of 2.98%.

Comparative Outcomes

Both groups demonstrated high surgical success within the first 36 months. However, Group 1 showed no recurrences during this period, whereas Group 2 demonstrated a low but measurable recurrence rate. Extended long-term assessment beyond three years was available only for Group 1 [10].

Discussion

Previous studies have emphasized the importance of correcting both vertical and horizontal eyelid laxity in involutional entropion repair [7-9]. The Wies/Quickert procedure directly addresses vertical instability through everting sutures while horizontal eyelid shortening provides added anatomical stability [2-4].

The absence of recurrence in Group 1 up to 36 months, combined with only a single late recurrence beyond 60 months, suggests durable long-term outcomes when horizontal laxity is corrected concurrently [5]. In contrast, although the LTS procedure is effective and widely accepted, recurrence has been reported in long-term follow-up studies, consistent with the findings of the present analysis [8-10].

These results support previously reported evidence that comprehensive correction of eyelid laxity may improve sustained surgical success in involutional entropion [7-9].

Conclusion

Both the Wies/Quickert procedure with horizontal eyelid shortening and the lateral tarsal strip procedure with everting sutures provide effective treatment for involutional lower eyelid entropion. The Wies/Quickert approach demonstrated excellent medium- and long-term durability, with minimal late recurrence. This technique may offer superior long-term anatomical stability, particularly in patients with combined vertical and horizontal eyelid laxity.

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