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# Wies procedure combined with anterior lamellar recession in the management of cicatricial entropion of the upper eyelid

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## Abstract

**Purpose:** To evaluate the efficacy of the Wies procedure combined with anterior lamellar recession in the management of cicatricial entropion of the upper eyelid.

**Patients and methods:** Nineteen patients (24 upper lids) with severe cicatricial entropion, trichiasis, and tarsal shortening were included in this study. Previous Snellen's operation was recorded in 6 patients (8 eyelids). All cases underwent anterior lamellar recession and wies procedure.

**Results:** No residual entropion (no lash-cornea touch) was recorded in all lids (100%). All cases developed postoperative edema that subsided gradually within one week. Over correction occurred in 2 lids (8.3%), and three eyelids developed infection (12.5%), which healed in few days after antibiotic therapy. The mean follow up was 9 months (range; 6 to12 months).

**Conclusion:** Wies procedure combined with anterior lamellar recession in the management of cicatricial entropion of the upper eyelid are effective especially for recurrent cases and short tarsus; no lid shortening developed postoperatively, and gave cosmetically accepted results.

## Introduction:

Cicatricial entropion of upper eye lid results from loss or scarring of the posterior lamella of the eye lid. Conjunctival scarring is the common denominator in cicatricial entropion. This cicatricial scarring may result from chronic blepharoconjunctivitis, trachoma, chemical injuries, trauma, chemical burns, any other acute or chronic inflammatory process, and systemic mucocutaneous disorders as ocular cicatricial pemphigoid (OCP), and Steven Johnson syndrome, SJS***(Ei Ti et al, 2001, and El-sedfy et al, 2003)***.

The conventional procedures however, often don't affect a permanent cure and my produce unwanted complications. Thus surgical management is recommended. Surgical treatments have initial success but long-term results are poor and recurrences are frequent. a wide variety of operations have been described , some require grafts as Van Milligen's operation but it had many drawbacks such as sloughing of the graft, infection and recurrence***(John et al,1992 and – Rubenzik et al, 1975)***. Other procedures included scleral graft, skin graft ***(Rubenzik et al, 1975 and Reacher et al, 1990)***, transverse tarsotomy and marginal rotation, and tarsal grooving (Snellen's operation) ***(Wu et al, 2010)***.

The WHO has approved the bilamellar tarsal rotation procedure (BTR). However, studies have shown that recurrence rates after surgery can be high ***(Kerie and Bejiga , 2010).***

This study **aim** was to report the efficacy of the Wies procedure (transverse blepharotomy and marginal rotation) combined with anterior lamellar recession in the management of severe cicatricial entropion of the upper or lower eyelid.

## Patients and methods:

This study was done in Al Zahraa University Hospital, in a period from September 2008 t o July 2010. It included, 24 upper eyelids for 19 patients (5 patients had surgery for both eyes), with severe cicatricial entropion and trichiasis

with tarsal shortening. Severe entropion was defined to be present if there was lash globe contact in primary gaze, conjunctival scarring, and tarsal deformity ***(Kemp and Collin, 1986).*** Previous treatment was recorded in 13 patients (17 eyelids), Snellen's operation for 6 patients (8 eyelids), and electrolysis and/ or diathermy for 7 patients (9 eyelids), while 6 patients (7 eyelids) were primary and had fibrosis with short tarsus. All cases underwent anterior lamellar recession and Wies procedure (transverse blepharotomy and marginal rotation).

**With support of *Groth (2003)*, the operation consisted of:**

1- Local infiltration an aesthesis
2- Splitting of the upper lid at grey line (just anterior to the orifices of meibomian glands), into anterior and posterior lamellae for 3mm. depth using super blade No.15.
3- Skin incision at the upper lid crease (3-4 mm. from the lash line) from the lateral canthus to a point of 2 mm. lateral to the punctum
4- Blunt splitting and retraction of orbicularis muscle (avoiding vascular injury), to expose the tarsal plate
5- Dissection on the anterior tarsal surface was carried superiorly into the space between Muller's muscle and levator aponeurosis and inferiorly into the lashes.
6- A full-thickness tarsal incision was made approximately 3mm above the lash line.
7- Recession of anterior lamella for 2-3 mm.
8- Four 6-0 vicryl double armed sutures were passed through the superior attached tarsus to the marginal tarsus at the site of recession and the two needles exit at the skin near the cilia ( just above the lashes). The bared area of exposed tarsus was left to granulate and to heal.
9- Skin stitches were interrupted and included levator aponeurosis to reform upper lid Crease. The sutures were removed after 10 days.

Patients were followed on the first day, one week, two weeks, and monthly for at least 6 months.

## Results

Twenty four upper lids of 19 patients were included in this study, 11women and 8 men with a mean age of 52.6 years (range, 41 – 72 years). Thirteen patients (17 lids) had recurrent entropion. All were diagnosed as cicatricial entropion (severe degree) and trichiasis that were followed up for a minimum of 6 months after surgery the mean follow up period was 9 months (range, 6 to 12 months).

A successful outcome was defined by ***Bleyen , and Dolman ( 2009),*** as no recurrence of the entropion or trichiasis and/or patient satisfaction at least 6 months postoperatively lid margin was restored to its position and no lash – glob contact with cosmetic acceptance (patients satisfaction), figure 1, 2 . All cases were successful cured (100%), figure, 1. Twenty two lids (91.7%) were satisfied cosmetically, while the remained 2 (8.3%) were unsatisfied due to overcorrection (figure, 2). No metablastic lashes posterior to the normal lash line were seen. No thickening of the lid margin was observed except for the overcorrected 2 cases (8.3%) which were from the recurrent cases. Three eyelids developed infection (12.5%) which healed in few days after antibiotic therapy. In the early postoperative period, all cases developed postoperative hyperemia of the exposed tarsus and edema of the lid that subsided gradually within one week (table, 1).

**Table (1): Post operative results.**

| Success (cure rate) | Cosmetic acceptance | Infection | Over correction | Recurrence | Thickened lid margin |
|---|---|---|---|---|---|
| 24 eyelids (100%) | 22 eyelids (91.7%) | 3 eyelids (12.5%) | 2 eyelids (8.3%) | Non (0.0%) | 2 eyelids (8.3%) |

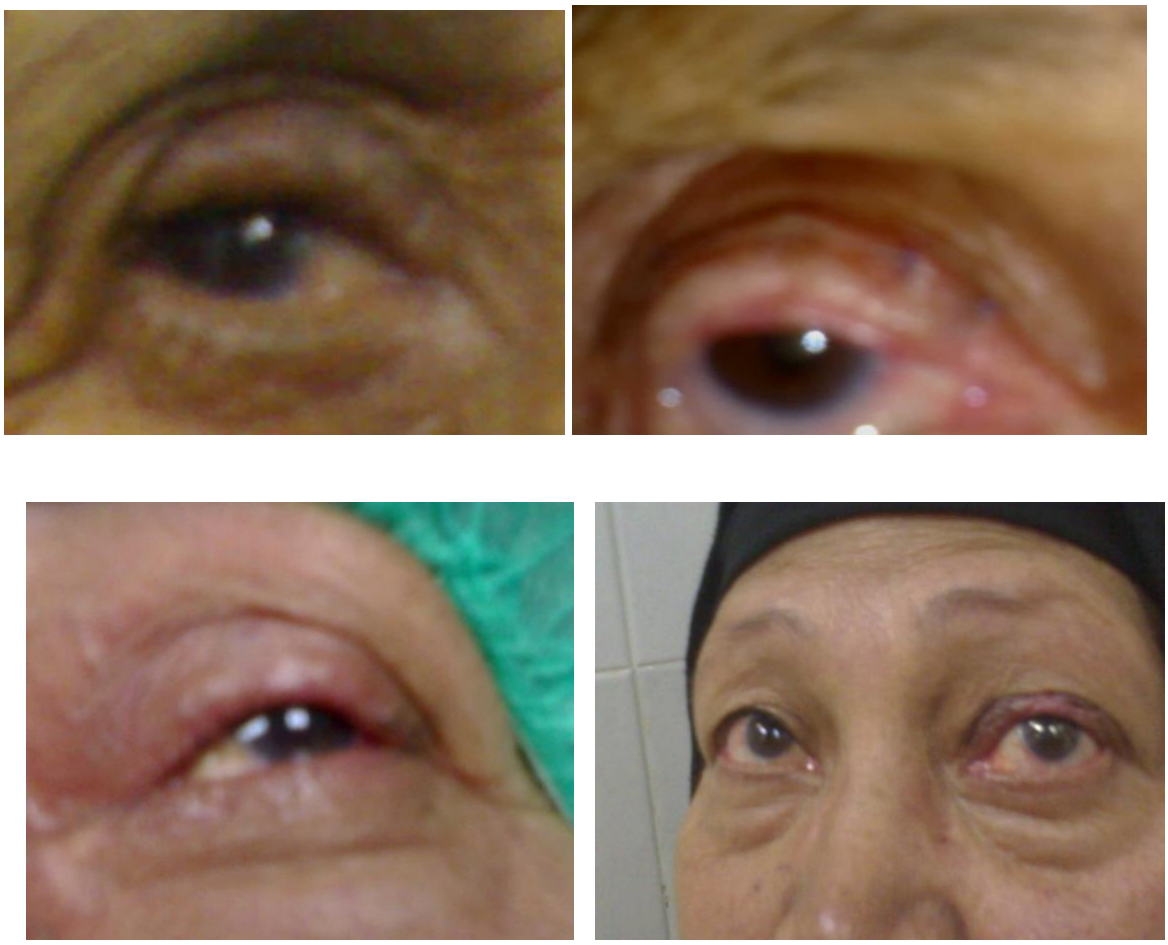

***Figure (1): Top left; preoperative (convex tarsus due to entropion). Top right; postoperative straightened tarsus after correction of entropion. Bottom left; preoperative. Bottom right; post.***

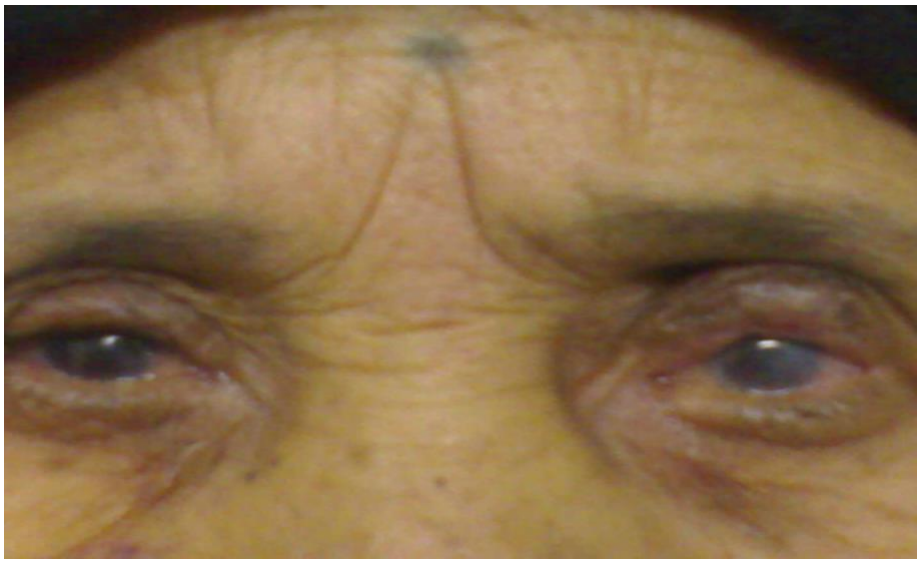

***Figure (2): Bilateral postoperative follow up; Rt: successful. Lt: overcorrected***

## Discussion

In cicatricial entropion, the basic is correction of the lid margin malposition, which may be affected by shifting the anterior and posterior lamellae or lengthening the deficient posterior lamellae by tarsal fracture or tarsal substitute ***(Yaqub, and Leatherbarrow (1997), and Elder, and Collin, 1996).***

Variable surgical techniques have been used for management of cicatricial entropion, with success rates ranging from 55%- 94% ***in the study of Kersten et al, (1992). A***ccording to the etiology and severity of entropion, Success rates of transverse tarsotomy with lid margin rotation in the report of ***Kersten et al, (1992),*** was 94% for mild to moderate entropion, and 55% for severe cases and they recommend it as the initial procedure after which more techniques may be used. The overall success rate was 85% and 14% developed recurrences that required a second procedure. Wies procedures were repeated with second success. This was against the severe complications stated by ***Groth (2003)***. Higher rate of success (100%) in this study can be attributed to combined anterior lamellar recession.

Combined procedures were reported with success 100%. In this study, combined wies procedure with anterior lamellar recession was used with that rate, also ***Sayed (2002)***, had higher success 100% in combined tarsal marginal rotation with super advancement of posterior lamella in a study similar in technique and success rate of 100% to that of ***Seif et al (1999)***. Other techniques included; tarsal wedge resection (Snellen's operation),anterior lamellar reposition, anterior lamellar recession, bilamellar tarsal rotation (tarsotomy), tarsal margin rotation, posterior lamellar advance, and use of various types of grafts. Failure of these procedures is attributed to unsatisfactory for severe cases, shortening of tarsus, cosmetically unacceptable or because the progressing cicatrization process ***Seif et al (1999)***. Various grafting, add the complexity of the procedure and the repair, unpredicted viability of the graft and poor vascularity of these lids, with a risk of secondary infection or sloughing of the graft ***(Reacher et al, 1990)***.

The Wies procedure combined with anterior lamellar recession is reasonably successful in managing cicatricial entropion and trichiasis of upper eyelids especially severe, recurrent cases, and cases of short fibrosed tarsus.

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# استخدام طريقة فايس مع ارجاع الشطر الامامي لحالات الالتفاف الداخلي التليفي للعين بالجفن العلوي

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التفاف الجفن للداخل الناجم عن تليفات للطبقه الخلفيه للجفن غالبا مايسببه التهابات مزمنة بالجفن والملتحمه . الطرق التقليديه غالبا لم تستوفي العلاج الدائم وقد ينتج عنها مضاعفات غير مرغوب فيها لذا يفضل العلاج الجراحي وله انواع كثيرة

يهدف البحث الي تقييم استخدام عملية فايس بالاضافه الي ارجاع الشطر الامامي للجفن العلوي فى حالات الدرجه المتقدمه من التفاف الجفن للداخل الناجم عن تليفات للطبقه الخلفيه للجفن

اشتمل البحث علي 19 مريضا ، 24 جفن علوي به التفاف داخلي تليفي من الدرجه المتقدمه منها 8 حالات مرتجعه بعد عملية تقصير الجفن (سنلن) وفي جميع الحالات تم عمل طريقة قياس مصحوبه بارجاع الشطر الامامي للجفن 2-3 مم .

كانت النتائج ايجابيه في جميع الحالات من حيث انه لا يوجد رجوع الالتفاف الداخلي .كما انه لا يوجد تلامس للرموش مع سطح المقله و لوحظ تورم للجفن بعد العمليه لكنه تحسن خلال اسبوع من العمليه و حدث ايضا التهاب في ثلاث حالات تم علاجه بالمضاد الحيوي المناسب .

يخلص البحث الي ان استخدام الطريقتين معا فعال في معالجة الالتفاف الداخلي التليفي للجفن العلوي مع عدم حدوث قصر في الجفن بعد العمليه كما انه مقبول من حيث المظهر الخارجي للمريض