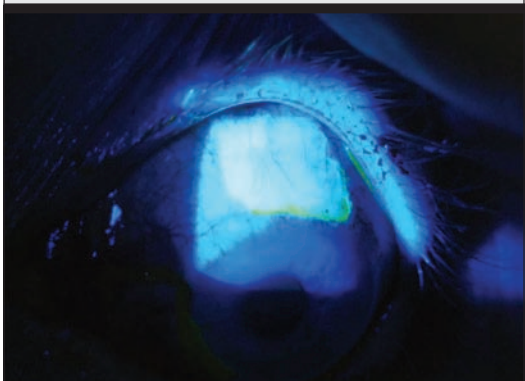


HISTORY OF PTERYGIUM TREATMENT

- ▶ PTERYGIUM HAS a long history of difficult treatment.
 - ▶ THE WORD pterygium comes from the Greek word pterygos, which means 'wing'.
 - ▶ SUSTARA (1 000 BC, Egypt) treated pterygium with pulverised salt and stimulation with a palm branch. When the pterygium was inflamed and swollen, he tore it out with forceps and removed any remaining tissue with a flesh-stripping ointment. He also described the ease with which the lesion reappeared!
 - ▶ HIPPOCRATES (469 BC) suggested the use of eye drops containing lead, zinc, copper, iron, bile juices, urine and maternal milk.
 - ▶ AMBROSE PARE (16th century) said, "You've learned that a pterygium is an illness that always recurs, even when you've done everything in your power to cure it." This concept has remained true to the present day!
 - ▶ MANY TREATMENTS HAVE BEEN USED TO IMPROVE SURGICAL OUTCOMES:
 - 1957** Topical beta-therapy with strontium 90 (Sr90)
 - 1962** Use of antimetabolites to prevent recurrence
 - 1964** Use of amniotic membrane to repair the conjunctival tissue loss following excision of the pterygium
 - 1985** Grafting autologous conjunctiva to the limbus
 - ▶ THE BASIC SURGICAL TECHNIQUES USED TODAY
 - Bare sclera** Stripping the pterygium and leaving the wound open to close naturally (an almost 30% recurrence)
 - Appositional repair** Repairing the wound by suturing the edges together with vicryl, silk or nylon 8/0 (10-25% recurrence)
 - Torsional flap** Repairing the wound with a flap of adjacent healthy conjunctiva (5-10% recurrence)
 - Free flap** Use of autologous conjunctiva or amniotic membrane to cover the wound, sutured with 8/0 (2-10% recurrence)
- Despite all efforts, surgical outcomes have remained indifferent.



The technique

The new technique still involves an autologous free conjunctival flap, harvested from the superior bulbar conjunctiva (pictured above). But instead of sutures, Tisseel is now used.

Eye opener

A new pterygium surgery technique, currently performed by only a few ophthalmologists in South Africa, produces superior cosmetic results. What's New DOC asked an eye surgeon who has performed pterygium surgery using tissue glue on 100 patients, to share his views

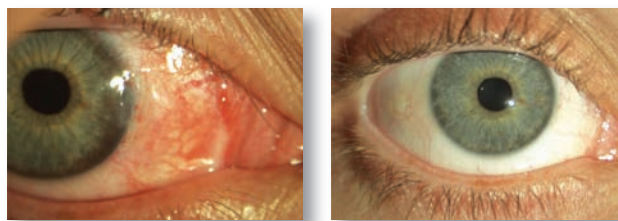
BY DR ETIENNE VAN ASWEGEN
OPHTHALMOLOGIST

Seeing is believing

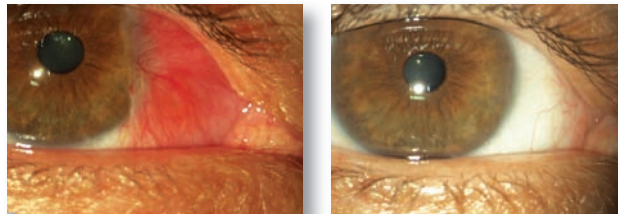
These pictures show the cosmetic results achieved using Tisseel instead of sutures.

Before

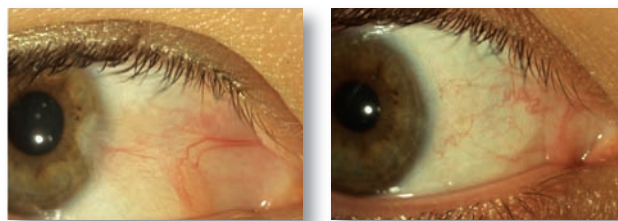
After



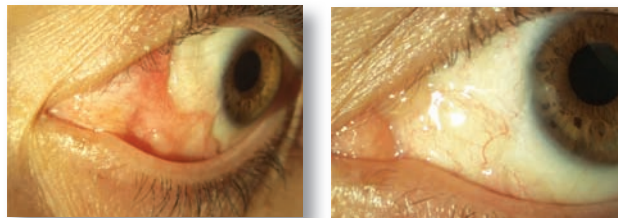
ABOVE LEFT: The eye a day after the procedure
ABOVE RIGHT: One month after surgery



ABOVE LEFT: The eye a week before the procedure
ABOVE RIGHT: One month later



ABOVE LEFT: The eye of a bride, one day before surgery and six weeks before her wedding day
ABOVE RIGHT: A week before the wedding



ABOVE LEFT: Failed surgery using Tisseel
ABOVE RIGHT: The same eye, operated on by a different surgeon

WHAT IS TISSEEL? It's a tissue glue that has been used extensively in general and neurosurgery. It simulates the final stage of the coagulation cascade to produce a biocompatible fibrin matrix clot that adheres to connective tissue like a natural plasma clot. It contains concentrations of fibrinogen and thrombin that when mixed, duplicate fibrinogenesis and clot formation with a high level of elasticity.

UNTIL RECENTLY, OUTCOMES of pterygium surgery have been, to say the least, indifferent. The affected eye often remained red and inflamed, with visible scarring and a high rate of recurrence.

But with a new technique that uses the tissue glue Tisseel, the cosmetic results have improved significantly, and the recurrence rate has dropped to less than 1% in a cohort of 100 patients.

Only a handful of South African eye surgeons are currently performing the new procedure, which requires extreme precision. The results are so astonishing that it will soon gain ground. It should, however, never be attempted by a GP or general surgeon.

The new technique still involves an autologous free conjunctival flap, usually harvested from the superior bulbar conjunctiva – but instead of sutures, Tisseel is now used.

WHAT ARE THE ADVANTAGES OF TISSEEL OVER SUTURES?

- ▶ The procedure is less time-consuming and there is much less irritation, pain and inflammation.
- ▶ Less follow-up is needed.
- ▶ Results are superior.

SHARING MY PERSONAL EXPERIENCE

In the first 100 cases – the first one using the new technique was performed in 2007 and the follow-up period ranged from 1-24 months – where I used Tisseel I found the following:

- ▶ There was no need for antimetabolites.
- ▶ Recurrences after previous conventional surgeries were successfully treated.
- ▶ Patient comfort was superior from day one.
- ▶ Cosmetic results were superior.
- ▶ There's been only one recurrence – because the patient did not use the steroid drops.

In a retrospective questionnaire of all my pterygium surgery patients, we scored an average of 9/10 for subjective impression of success and cosmetic results.

One of the 100 cases involved pterygium surgery performed on a bride-to-be only six weeks before her wedding. I would never have dreamt of attempting pterygium surgery using the 'older' techniques. ●



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