

Cornea and Anterior Segment

Chairperson: A Anduze

Big Bubble DALK

D Singh

Updates on Graft Surgery

C Rostron

An alternative to the Big Bubble in Deep Anterior Lamellar Keratoplasty

C Ronstron, CK Rostron

Deep anterior lamellar keratoplasty (DALK) is now a well-established, preferred choice of surgical intervention for many corneal stromal pathologies, especially for some cases of keratoconus. Of course, such cases could be treated by penetrating keratoplasty (PK), so why do we choose the more technically difficult procedure of DALK over PK? Because many such patients are relatively young at the time of their surgery, so that very long-term graft survival is required, and the reduced-risk of rejection related problems is beneficial, as well as the option of performing larger sized grafts. However, these benefits are only realised if DALK surgery is successfully completed, and whilst 'Big Bubble' DALK is generally magnificent, if Descemet's membrane is ruptured, conversion to PK is sometimes required. The alternative approach of DALK to Dua's layer offers a less heart-stopping route to achieving acceptable results, and enables the choice of use of donor tissue without viable endothelium.

Descemets Striping Automated Endothelial Keratoplasty: Methods of Graft Insertion

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Posterior lamellar keratoplasty (PLK) was first described by Dr G Melles in 1998. There has since been many modifications of technique aimed at simplifying the procedure, minimizing endothelial cell density (ECD) loss, improving visual outcome and graft survival. Some critical issues are wound construction, anterior chamber maintenance, graft thickness and insertion of the donor tissue. Significant efforts has been directed towards developing methods of graft insertion and the use of forceps have given way to inserters that minimize graft trauma and largely prevents the complication of flipping the donor tissue in the anterior chamber. Although having no facilities for assessing ECD loss, the author has successfully used three methods of graft insertion i) the Busin glide, ii) needle insertion and iii) the Tan Endoglide. Video footage will be employed to demonstrate the techniques

Updates on using K-Pro Corneal Prosthesis

V Perez

Improving Skills in Managing the Keratoconus Patient

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The introduction of corneal cross-linking has increased the treatment possibilities for Keratoconus. Early diagnosis, as provided by modern corneal topography, is required to guide the decision making. Experts agree that abnormal posterior steepening, abnormal corneal thickness distribution, and non-inflammatory corneal thinning are essential

to diagnose keratoconus.

Severity and progression are chief indicators for treatment and timing-decisions. Age, demands of job and academic pursuits must also be considered.

Non-surgical management:

- i) Avoid rubbing by use of allergy and dry-eye medications.
- ii) Optical correction in mild, non-progressive disease with spectacles or contact lenses.

Surgical options:

Corneal cross-linking should be considered first line intervention in early cases.

Intracorneal ring segments (ICRS) alone or in combination with other modalities *eg.* CxL or photo refractive keratectomy (PRK).

Keratoplasty – penetrating or lamellar depending on the extent of scarring.

A Comparison of the Efficacy of Anchored Conjunctival Rotation Flap and Free Conjunctival Autograft Techniques in Primary Pterygium Excision Surgery

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Objective: To demonstrate the efficacy of anchored conjunctival rotation flap techniques as compared to free con-

junctival autograft techniques, in terms of recurrence and complication rates, in a primary pterygium excision surgery.

Method: In this retrospective study, 162 consecutive patients (178 eyes) underwent pterygium surgery (M:F = 74:88), either using the conjunctival autograft (105 eyes) or anchored conjunctival rotation flap (73 eyes) techniques. Operation time was recorded for each surgery. Mean follow-up time in the autograft group and rotational flap group was 12 and 10 months, respectively. Early postoperative complications were assessed. The recurrence rate of pterygium was evaluated and a comparison was made between the two surgical techniques.

Results: The occurrence of flap or graft oedema was lower for rotational flap surgery (6.6% vs 4.1%). Loose graft was observed in three (2.8%) patients in the autograft group and two (2.7%) patients in the rotational flap group; Tenon's granuloma was found in one (0.9%) patient in the autograft group. In the autograft group, the recurrence rate was 1.9% and 1.3% in the rotational flap group ($p = 0.7851$). Mean operation time was 25.9 ± 5.5 (range, 19–35) minutes in the autograft group and 16.6 ± 1.7 (range, 14–20) minutes in the rotational flap group.

Conclusions: The anchored conjunctival rotational flap surgery showed similar pterygium recurrence rates and a lower incidence of complications, compared with the conjunctival autograft technique. This demonstrated that the anchored conjunctival rotational flap surgery technique is as efficient as the conjunctival autograft technique, with the advantage of shorter operation time.