

## Factors affecting corneal strip stroma-to-stroma adhesion

J Refract Surg 1998;14:460-3

Edward P. Perez, Blanca Viramontes, Paulo Schor, David Miller

*Background:* Successful laser in situ keratomileusis depends on strong adhesion between the dissected anterior corneal flap and the underlying stromal bed, without suturing. This study attempts to generate new information about the mechanism of this adhesion.

*Methods:* Strips of fresh bovine corneal stroma were dissected and split apart. The split strips were then made to adhere to each other with varying amounts of combined heat and drying. A relationship was developed between heat applied and hydration of strips. After each heat and drying treatment, the strips were pulled apart and the force needed to accomplish this task was measured.

*Results:* There was a tight linear correlation between increase in temperature and decrease in water content ( $R^2 = 0.7414$ ) and between decrease in water content and increase in the adhesive force ( $R^2 = 0.3355$ ).

*Conclusion:* This model suggests that drying increases stromal-stromal adhesion. We speculate this is due to the increased concentration of surface molecules, which have high ionic charge densities and ionic bonding. A higher concentration of these molecules produces stroma-to-stroma adhesion via ionic bonding.

---

## Ocular manifestations in the acute phase of leptospirosis

Ocular Immunology and Inflammation 1998;6(2):75-9

M. G. Martins, K. T. F. Matos, M. V. da Silva, M. T. de Abreu

*Objectives:* To study the ocular manifestations during the acute phase of leptospirosis and their incidence in hospitalised patients due to systemic complications, and to verify the importance of routine ophthalmologic care in these cases.

*Methods:* Twenty-one patients, 20 males and 1 female, with clinical and laboratory (ELISA IgM) diagnoses of leptospirosis were subjected to ophthalmologic examination.

*Results:* We observed conjunctival hyperemia in 18 patients (85.7%), increased retinal venous caliber in 12 patients (57.1%), optic disc redness in 12 patients (57.1%),

subconjunctival hemorrhage in four patients (19.0%), optic disc edema in one patient (4.8%), retinal vasculitis in one patient (4.8%), retinal hemorrhage in one patient (4.8%), hard exudates in one patient (4.8%), and papillitis in one patient (4.8%). No anterior chamber reaction was found.

*Conclusions:* We observed a high incidence of several ocular manifestations in the acute phase of leptospirosis. Despite the systemic severity and high incidence of ocular disorders in the acute phase of leptospirosis, the short-term visual outcome of these patients was good.

## Palpebral paracoccidioidomycosis

Mycopathologia 1997;140:29-33

Sergio Vanetti Burnier, Ana Estela Sant'Anna

This paper describes two cases of eyelid paracoccidioidomycosis (South American blastomycosis) in which it was the first signal of the disease. In both cases the first clinical diagnosis made was not a fungal infection, but a neoplastic disease that was not confirmed by the pathology study. In the first patient we suspected a primary infection on the eyelid,

because there was no other systemic signs of the disease, and in the second patient we noted a very advanced pulmonary lesions caused by the *Paracoccidioides brasiliensis*. We believe that, in endemic areas, the histopathological study should be made before every excisional procedures to avoid unnecessary palpebral mutilation.

---

## Levator aponeurosis surgery in Schwartz-Jampel syndrome

Ophthalmic Plast Reconstr Surg 1998;14(4):271-6

Antonio A. V. Cruz, Carmo A. Souza, Luiz S. Plastino Júnior

Schwartz-Jampel syndrome is a rare disorder with prominent palpebral fissure changes. These changes are complex and have been described as ptosis, blepharophimosis, and blepharospasm.

Two new cases of the Schwartz-Jampel syndrome and the results of elevating the upper eyelid margin with levator aponeurosis surgery are presented, along with a review of the literature.

---

## Eyelid changes in long-standing leprosy

Ophthalmic Plast and Reconstr Sug 1998;14(4):239-43

Fernando C. Guimarães, Antonio Augusto V. Cruz

To describe eyelid changes in ocular leprosy, 74 patients (148 eyes or 296 eyelids) were examined, focusing on eyelid abnormalities. The adnexal examination included evaluation of the upper eyelid crease pattern, qualitative assessment of the orbicularis oculi muscle function, measurement of the distance between the corneal reflex and the upper eyelid margin (margin reflex distance), and slit-lamp biomicroscopy of the eyelashes and tarsal conjunctiva. Eyelash ptosis was a

common finding associated with a multiple upper eyelid crease pattern and trichiasis. In the past, eyelash ptosis has probably been diagnosed as upper eyelid entropion or trichiasis, but in this series entropion was not observed. The distinction between eyelash ptosis, trichiasis, and upper eyelid entropion is important because the surgical management for each is different. Other true leprotic abnormalities of the eyelids are lagophthalmos and lower lid ectropion.

# Ophthalmic artery aneurysms: an investigation by duplex scan

Ultrasound in Medicine and Biology 1997;23:1319-23

Lazslo Molnar, José G. Caldas, Vital P. Costa, Giovanni G. Cerri

With the objective of analysing the postaneurysmal peak systolic velocity (PSV) in ophthalmic arteries, duplex scanning was analyzed in 28 carotid-ophthalmic artery segments after exclusion of ipsilateral carotid stenosis. For comparison, the angiographic study of the extracranial and intracranial carotid system was utilized as the "gold standard". A subgroup of 7 subjects with 8 ophthalmic arteries with aneurysms identified where the artery leaves the internal

carotid artery presented with PSVs significantly reduced (17.95 + 7.99 cm/s) compared to the mean PSVs in the healthy group (27.95 + 5.54 cm/s) ( $p = 0.006$ ). A PSV of less than 19 cm/s offered a sensitivity of 80% and a specificity 100% in diagnosing ophthalmic artery aneurysms. We conclude that duplex scan is diagnostically useful in the identification of patients with ophthalmic artery aneurysms when severe ipsilateral carotid stenosis is excluded.

---

# Needling versus medical treatment in encapsulated blebs: a randomized, prospective study

Ophthalmology 1997;104:1215-20

Vital P. Costa, Marcelo M. Correa, Newton Kara-José

*Purpose:* To compare the efficacy and safety of transconjunctival needling and medical treatment in eyes with encapsulated blebs. *Design:* A randomized, prospective study. *Participants:* 282 eyes which underwent a guarded filtration procedure between January 1994 and January 1996 at the Glaucoma Service of University of Campinas. *Intervention:* Twenty five of 282 eyes (8.9%) developed encapsulated blebs and were randomized to either needling ( $n = 14$ ) or medical treatment with aqueous humor suppressants ( $n = 11$ ). If one treatment failed to maintain intraocular pressures below 20 mmHg, the other treatment was initiated. If both methods failed, surgical revision or further glaucoma surgery was performed. Complete success was defined as IOP < 20 mmHg after one treatment modality. Qualified success was defined when IOPs < 20 mmHg were obtained with both treatment modalities, whereas failure was defined when IOP > 21 mmHg or when further surgery was indicated. *Main Outcome Measures:* IOP, vision, and

number of antiglaucoma medications. *Results:* After a mean follow-up of 9.6 months, medical treatment alone was successful in 10 patients (90.9%), whereas needling alone was successful in one patient (7.1%) ( $p = 0.00003$ ). In the needling group, 92.9% of the eyes required aqueous humor suppressants, and 57.1% were considered qualified successes at the last follow-up (mean = 10.1 months). At the last follow-up examination, there was no statistically significant difference between the mean number of medications in both groups ( $p = 0.797$ ). Further glaucoma surgery was performed in 5 patients (35.7%) undergoing needling and one patient (9.1%) receiving medical treatment ( $p = 0.162$ ). *Conclusions:* Medical treatment with digital pressure should be employed as the initial treatment in eyes with encapsulated blebs. Needling procedures or surgical revision, methods which are more invasive and potentially associated with severe complications, should be limited to the small percentage of eyes that do not respond to medical treatment.

# Collateral blood supply through the ophthalmic artery: a steal phenomenon analyzed by color doppler imaging

Ophthalmology 1998;105:689-93

Vital P. Costa, Celso A. Carvalho, Sérgio Kuzniec, Lazslo Molnar, Giovanni G. Cerri, Pedro Puech-Leão

**Objective:** To evaluate the retrobulbar circulatory effects of reversed ophthalmic artery flow (ROAF) upon the ophthalmic artery branches by means of color Doppler imaging (CDI). **Design:** Case controlled study. **Participants:** Among 56 consecutive patients with severe (greater than 70% stenosis) occlusive carotid artery disease (OCAD), 15 patients with ROAF (26.8%) were identified. The control group consisted of 15 patients with similar degrees of carotid artery stenosis and forward ophthalmic artery flow. **Intervention:** Arteriography and measurement of the retrobulbar hemodynamic parameters with color Doppler imaging. **Main Outcome Measures:** Blood flow velocities and resistive index in the ophthalmic, central retinal and temporal short posterior ciliary arteries. **Results:**

Arteriography confirmed the diagnosis of ROAF in all 15 patients. There was no patient with ROAF diagnosed by arteriography and not diagnosed by CDI. The frequency of bilateral severe OCAD was significantly higher in the ROAF group (40%) compared to the control group (6.6%) ( $p = 0.04$ ). Patients with ROAF demonstrated significantly reduced vascular resistance in the ophthalmic artery ( $p = 0.03$ ), higher vascular resistance and lower blood flow velocities in the central retinal and temporal short posterior ciliary arteries ( $p < 0.05$ ). **Conclusion:** This study suggests that patients with ROAF show a steal phenomenon, characterized by a shunt to the low resistance intracranial circuit and reduction of retrobulbar blood flow.

## XXI Curso de Ciências Básicas em Oftalmologia

O Departamento de Oftalmologia da Universidade Federal de São Paulo - UNIFESP-EPM realizará o XXI Curso de Ciências Básicas em Oftalmologia, patrocinado pelo Conselho Brasileiro de Oftalmologia, Associação Pan-Americana de Oftalmologia e Instituto Paulista de Estudos e Pesquisas em Oftalmologia.

**Início:** 01 de fevereiro de 1999

**Término:** 05 de abril de 1999 (a confirmar)

**Coordenadores:** Dra. Ana Maria Noriega Petrilli  
Prof. Dr. Ernesto Consoni Filho

### Pré-requisitos para participação:

- ser aluno de Curso de Especialização credenciado pelo CBO
- ser formado há mais de 5 anos com título de especialista pelo CBO
- ser pós-graduando em oftalmologia (título de especialista pelo CBO)

**Objetivo:** Fornecer informações sobre ciências básicas na área de oftalmologia.

**Preço:** R\$ 600,00 (duas parcelas de R\$ 300,00)

### Vagas Limitadas

**Inscrições:** 15 a 29 de janeiro de 1999

**Local:** Secretaria do Departamento de Oftalmologia da UNIFESP

**Informações:** Tel.: (011) 5085-2004 - Srta. Ana Leite

Fax: (011) 573-4002 - e-mail: Ana@oftalmo.epm.br