SUTURELESS CATARACT SURGERY IN DEVELOPING COUNTRIES

In industrialised countries phacoemulsification has become a standard procedure for cataract extraction. In contrast, in developing countries while intraocular lens surgery is routinely performed, phacoemulsification is not. Nevertheless, several techniques for self-sealing sutureless incisions have been developed in this setting. Hennig and coworkers describe a series of cataract patients operated on in Nepal. In this study rapid recovery of good vision could be achieved with sutureless manual extracapsular cataract extraction at a low cost in an area where high volume cataract surgery is performed. See p 266

NON-STEROIDAL ANTI-INFLAMMATORIES INTERFERE WITH IOP REDUCTION BY LATANOPROST

Latanoprost, a prostaglandin, is now widely used as an antiglaucoma treatment. The mechanism of action of this drug appears to be via an increase of uveoscleral outflow by remodelling extracellular matrix and relaxation of ciliary muscle bundles. It appears that latanoprost may reduce intraocular pressure by either direct signal transduction through the FP receptor or indirect action through endogenous prostaglandins. Kashiwagi and Tsukahara demonstrate in 13 normal volunteers that non-steroidal anti-inflammatory solutions may interfere with the intraocular pressure reduction induced by latanoprost. This may be the result of non-steroidal anti-inflammatory drugs inhibiting the induction of endogenous prostaglandins through suppression of the activity of cyclo-oxygenases. See p 297

CHEMOTHERAPY IN A TREATMENT OF UNILATERAL RETINOBLASTOMA

Retinoblastoma is the most common eye tumour in children. It is unilateral in 60% of cases. Most unilateral tumours are treated by enucleation. Successful enucleation cannot be achieved in cases of major buphthalmia and or radiological detection of optic nerve invasion at diagnosis. Bellaton and coworkers report six patients with unilateral retinoblastoma with buphthalmia or optic nerve invasion. These patients were treated with chemotherapy using etoposide and carboplatin. They suggest that neoadjuvant chemotherapy may be useful in extensive unilateral retinoblastoma with good short term survival. See p 327

GENETIC INHERITANCE OF NON-SYNDROMIC COLOBOMAS

A coloboma is defined as a congenital defect in uveal tissue in a site consistent with abnormal closure of the embryonic fissure. In most populations colobomas not associated with systemic syndromes are sporadic in nature. Autosomal dominant inheritance in most populations is the most common mechanism reported for genetic inheritance of colobomas. However, Hornby and coworkers report 56 probands of familial cases of isolated ocular colobomatous malformations in a series from south India. In this study 21% of cases were familial. Both autosomal dominant and autosomal recessive mechanisms of inheritance were reported in this highly consanguineous population. No families with X linked inheritance were seen in this study. The sibling involvement was low in this study—3.8% even with consanguineous parents. The authors caution that the findings of their study may not be applicable to populations where consanguinity is not common. See p 336

APOPTOSIS IN HUMAN CORNEAL ENDOTHELIAL CELL LINE

Apoptosis is a fundamental biological process in mammals, whereby cells die by activating an intrinsic suicide mechanism. A family of cysteine proteases related to interleukin 1B converting enzyme (ICE) and termed caspases play a crucial part in apoptosis. Thuret and coworkers studied apoptosis in human corneal endothelial cells. Apoptosis was induced by the mycotoxin staurosporine. Early detection of caspases-3 activity following exposure to staurosporine strongly suggests that apoptosis involving human endothelial cells is at least in part activated by caspase-3. This model may be useful in studying strategies to inhibit cell death in human corneal cells. See p 346