COMMON EYE CONDITIONS AND TREATMENT

CATARACTS

WHAT IS IT?

Cataract is a clouding that develops in the crystalline lens of the eye or in its envelope, varying in degree from slight to complete opacity and obstructing the passage of light. Early in the development of age-related cataract the power of the lens may be increased, causing near-sightedness (myopia), and the gradual yellowing and opacification of the lens may reduce the perception of blue colours. Cataracts typically progress slowly to cause vision loss and are potentially blinding if untreated.

A senile cataract, occurring in the aged, is characterized by an initial opacity in the lens, subsequent swelling of the lens and final shrinkage with complete loss of transparency. Moreover, with time the cataract cortex liquefies to form a milky white fluid in a Morgagnian cataract, which can cause severe inflammation if the lens capsule ruptures and leaks. Untreated, the cataract can cause phacomorphic glaucoma. Very advanced cataracts with weak zonules are liable to dislocation anteriorly or posteriorly. Such spontaneous posterior dislocations (akin to the historical surgical procedure of couching) in ancient times were regarded as a blessing from the heavens, because some perception of light was restored in the cataractous patients.

CAUSES

Cataracts develop from a variety of reasons, including long-term ultraviolet exposure, exposure to radiation, secondary effects of diseases such as diabetes, hypertension and advanced age; they are usually a result of denaturation of lens proteins. Genetic factors are often a cause of congenital cataracts and positive family history may also play a role in predisposing someone to cataracts at an earlier age, a phenomenon of "anticipation" in pre-senile cataracts. Cataracts may also be produced by eye injury or physical trauma.

TREATMENT

When a cataract is "ripe" (sufficiently developed to be removed by surgery), the most effective and common treatment is to make an incision (capsulotomy) into the capsule of the cloudy lens in order to surgically remove the lens. There are two types of eye surgery that can be used to remove cataracts: extra-capsular (extracapsular cataract extraction, or ECCE) and intra-capsular (intracapsular cataract extraction, or ICCE).

Extra-capsular (ECCE) surgery consists of removing the lens but leaving the majority of the lens capsule intact. High frequency sound waves (phacoemulsification) are sometimes used to break up the lens before extraction.

Intra-capsular (ICCE) surgery involves removing the entire lens of the eye, including the lens capsule, but it is rarely performed in modern practice.

In either extra-capsular surgery or intra-capsular surgery, the cataractous lens is removed and replaced with a plastic lens (an intraocular lens implant) which stays in the eye permanently.

Cataract operations are usually performed using a local anaesthetic and the patient is allowed to go home the same day.

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