Fact Sheet

Glaucoma Australia
Saving sight

Our vision: Is for Australians to be free of glaucoma blindness

Glaucoma in older Children and Adolescents

Glaucoma in older children (greater than 2 years old) and adolescents is similar to glaucoma in adults. Glaucoma in children of all ages is rare, unlike adult open angle (chronic) glaucoma, which is relatively common. Glaucoma affects approximately 1 in 2000 children.

Causes

Glaucoma in children older than two years is often secondary to other ocular disease or an underlying general disease that affects the child. Examples associated with other ocular diseases are glaucoma following surgery for congenital cataract (aphakic glaucoma) and glaucoma secondary to iritis (inflammation of the iris which in children that is often associated with juvenile chronic arthritis).

Examples of underlying general diseases of childhood that may be associated with the development of glaucoma are neurofibromatosis type 1 (a disorder of the skin/ eye and nerve tissue) and Sturge-Weber syndrome (a vascular birthmark or port wine stain on the face associated with a risk of glaucoma and epilepsy). Primary open angle glaucoma does occur rarely in older children and adolescents.

Who is at risk?

Primary open angle glaucoma in adolescents may show a familial tendency just as in adult open angle glaucoma. Inherited juvenile open angle glaucoma

is well recognised but very rare. This form of glaucoma is generally not detectable till the twenties rather than during later childhood.

Most research into the causes and treatment of glaucoma is directed to understanding adult glaucoma. Fortunately many of these advances can be modified to treat children with glaucoma.

Symptoms

In older children the eye responds to increased intraocular pressure in a manner similar to adults. Unlike younger children there is no increase in the size of the eye and the cornea does not become cloudy. Thus the onset of glaucoma in these children is much more likely to be asymptomatic.

Detection

The child needs to be assessed by an ophthalmologist. Ideally the child should be referred to an ophthalmologist with experience in managing childhood glaucoma. The nature of assessment undertaken varies with the age of the child. In children over 7 years the tests used are very similar to those used for adults, i.e. pressure measurement, visual field assessment and examination of the optic disc after dilatation of the pupil.

Treatment

The treatment for glaucoma in older children is generally medical (eye drops) initially and if these fail, surgery is considered. This is similar to the situation with older adults with glaucoma.

Operations such as trabeculectomy or drainage tubes are used. These procedures aim to create a controlled leak or "fistula" by which the aqueous can bypass the trabecular meshwork and escape to drain via the external blood system of the eye.

As with adults anti-inflammatory and antibiotic drops are used post operatively. When trabeculectomy is performed in children an antimetabolite such as 5-fluorouacil (5-FU for short) is very often used as children heal much more rapidly than adults.

Laser trabeculoplasty is rarely used in the treatment of glaucoma in children of any age. A cyclo destructive procedure, such as diode laser treatment of

the ciliary body, is sometimes used in the treatment of aphakic glaucoma in children.

Ongoing Management

As in any person if glaucoma is not appropriately treated there is a risk of progressive visual impairment. Rarely does childhood glaucoma result in severe visual impairment but life-long follow up is needed for all children after a diagnosis of glaucoma is made.

In general there is little need to alter lifestyle. Adolescents often have difficulty accepting the need for long-term medication and regular medical review. Ensuring compliance with regular use of eye drops may be especially difficult