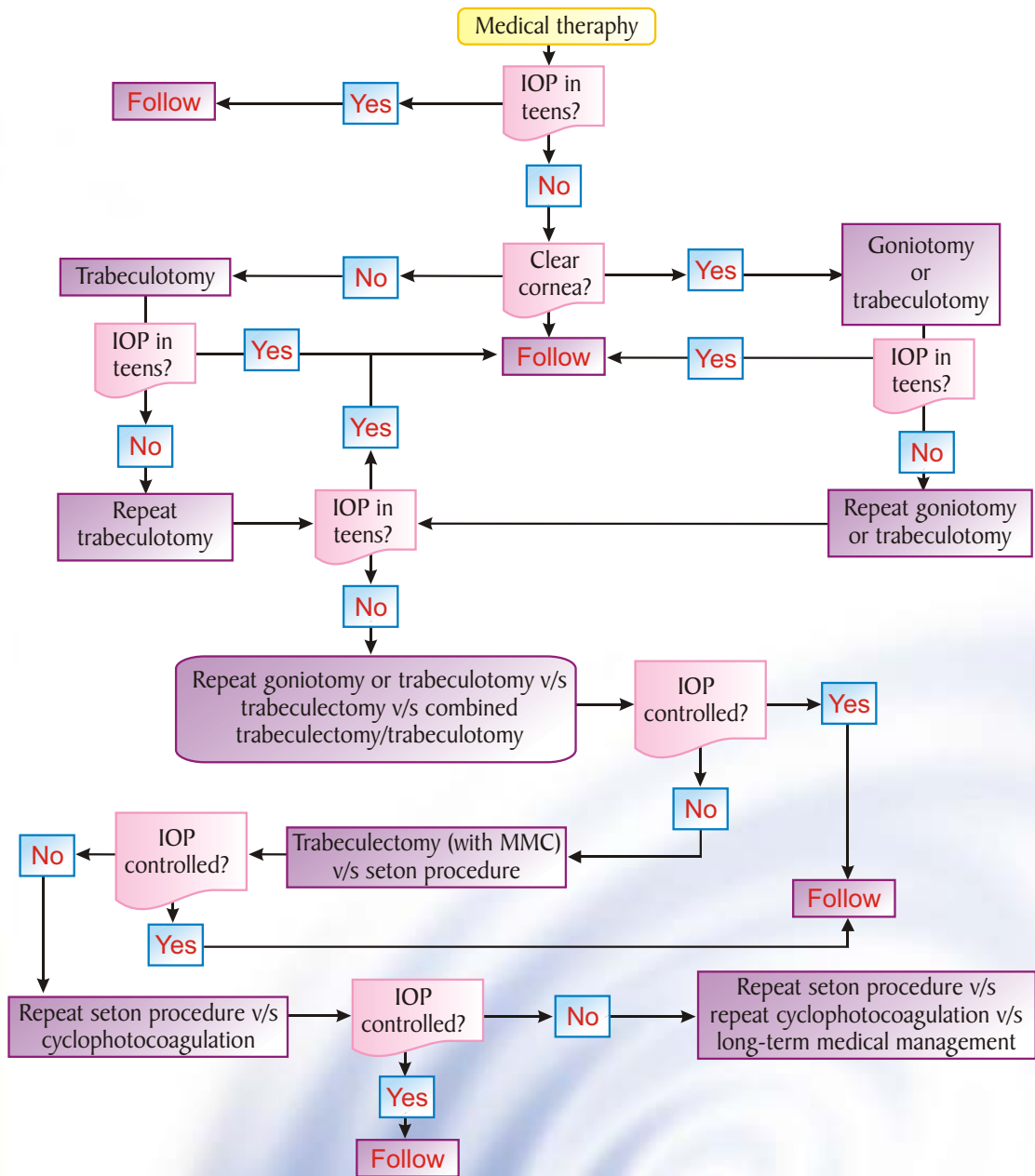


### Congenital Glaucoma



Decision tree for medical therapy

## Congenital Glaucoma

Congenital glaucoma is a group of rare but sight threatening disease.

- **Primary congenital glaucoma** results from developmental abnormalities in anterior chamber angle, which lead to obstruction of aqueous outflow.
- **Secondary congenital glaucoma** results from diseases process involving other regions of eye and body.
- They are both frequently accompanied by systemic conditions.

The normal values for IOPs for children typically lower than normal IOPs for adults.

Normal IOP for newborns is 9.5 mmHg as compared to patients of 7-8 yrs of age having an IOP of 13.95 mmHg.

### Medical Management and Treatment

- Generally treated surgically but medical therapy is also often necessary to help control IOP.
- Patients are placed on medications to lower IOP before surgery.
- Lowering the IOP significantly helps to clear the cornea, thus increasing safety and decreasing complications.
- Although beta-blockers like timolol are well tolerated in pediatric population, the possibility of systemic side effects does exist.
- In pediatrics mitotics are not as effective as they tend to be in adult patients.
- Epinephrine and dipivefrin have problems like ocular tolerability and systemic toxicity, hence not used in congenital glaucoma.
- **Prostaglandin analogues like latanoprost have a longer track record and seem to work effectively in pediatric patients with a convenient dosing frequency.**

### Surgical Management

Surgery is the mainstay of management of primary congenital glaucoma. Two types of surgery are generally performed.

#### A. Goniotomy:

- Traditional procedure of first choice.
- Not possible to perform with a cloudy cornea.
- Technically more challenging than trabeculotomy

#### B. Trabeculotomy

- Ab externo trabeculotomy is more familiar to glaucoma surgeons.
- Does not require technically skilled assistant, surgical lens or clear cornea.
- It may induce scarring. trabeculotomy treats the entire meshwork and removes it as an obstacle to aqueous outflow.
- Versatile approach can be used in almost all congenital glaucoma patients.

#### C. Other Surgeries

- Cyclodestructive procedures are usually reserved for eyes with end stage glaucoma with multiple treatment failures, poor vision, or persistent inadequate control.
- Nd: YAG cyclophotocoagulation provided reasonable success with a much lower complication and discomfort rate, in children, it is used on a limited basis.

### Complicated Secondary Childhood Glaucomas

Management of secondary complicated childhood glaucoma is less defined than that of primary congenital glaucoma, with comparatively lower success rates.

Treatment is initially medical however surgical techniques of goniotomy, trabeculotomy, trabeculectomy and setons have been used.