

# Leukocoria

**Leukocoria** is a whitish pupillary reflex. It is a tension dilation of the pupil that resembles **a cat's eye**. Leukocoria is a very serious symptom of intraocular pathology. The whitish glow is caused by the reflection of light from the pathological mass. As part of the differential diagnosis, it is very important to find out essential anamnestic data. The doctor should ask about the family occurrence of eye diseases, the period of onset of leukocoria, or the patient's contact with domestic animals. Then we perform a general eye examination and auxiliary examinations (USG B - scan, fluorescence angiography, CT, ELISA).

## Disease causing leukocoria

### Retinoblastoma

Retinoblastoma is a *malignant tumor of the retina* with an incidence of 1:20,000 newborns. It is a unilateral finding in two thirds of cases. It mostly occurs in children under three years of age. Leukocoria is one of the most common clinical manifestations of the tumor along with strabismus. Light reflection from **the white mass of the tumor** occurs during its growth endophytically by reflection from the vitreous or during exophytic growth during secondary retinal detachment. It is important to do a general examination in mydriasis and general anesthesia for all suspicious findings, so as not to overlook tumors of smaller size. In the case of early detection, when the tumor does not grow outside the eye, the success rate of treatment is 90-100%. The treatment is chemotherapy, local therapy, radiotherapy and, in the worst case, complete enucleation, which is not very common nowadays.



Leukocoria in retinoblastoma

 For more information see *Retinoblastoma*.

### Congenital Cataract

Congenital cataract or congenital **clouding of the eye lens** disrupts the transparency of the lens during a critical period of binocular vision development. It occurs with an incidence of 4-8:20,000 new births, where approximately one third of cases may be of familial origin. In the Czech Republic, a *wide screening for congenital cataracts* was introduced, the authorship of which comes from the Eye Clinic for Children and Adults at the Motol General Hospital. In a healthy child, the doctor should see a red reflection of the retina, then the test is considered negative. In the case of a positive test, further specialized examinations and possible surgical intervention follow.

### Toxocarosis

This is a *helminthiasis* caused by *Toxocara canis* or *cati*, in which from a clinical point of view we distinguish visceral, ocular and mixed forms. Eye involvement is usually unilateral. It manifests as retinal **granuloma** or chronic endophthalmitis. In the anamnesis, contact with animals is indicated, and the diagnosis is subsequently confirmed by positive antibodies against Toxokaria.

### Retinopathy of prematurity

It is especially dangerous for *severely premature newborns*. Leukocoria manifests itself here in the later stages of the disease, in which there is a **detachment of the retina**.

### Persistent hyperplastic primary vitreous

Persistence of the primary vitreous is a developmental abnormality where after the birth of the child, a part of the **hyaloid vascular bundle** remains, which should disappear during normal embryonic development. This is usually a one-sided defect. The vitreous is permeated by fibrovascular tissue, traction behind the ciliary processes causes glaucoma and retinal detachment may also occur.

## Links

### Related Articles

- Cataract
- Retinal detachment

### References

- HYCL, Josef. *Oftalmologie : minimum pro praxi*. 2nd edition. Triton, 2006. ISBN 80-7254-827-1.
- BARÁKOVÁ, Drahomíra. *Nádory oka*. 1st edition. Prague : Grada, 2002. ISBN 80-247-0141-3.
- KOLÍN, Jan. *Oční lékařství*. 2. edition. Karolinum, 2007. 0 pp. ISBN 978-80-246-1325-3.
- LANG, Gerhard K. *A pocket textbook atlas. Ophthalmology = [Orig : Augenheilkunde]*. 3rd edition. Stuttgart : Georg Thieme Verlag, 2007. ISBN 978-3-13-126162-5.