Posterior lenticonus
Published on 10.04.2005

DOI: 10.1594/EURORAD/CASE.3441
ISSN: 1563-4086
Section: Head & neck imaging
Imaging Technique: Ultrasound
Case Type: Clinical Cases
Authors: Reus M, Redondo MV, Serrano C, Abellán D, Puerta A
Patient: 2 months, female

Clinical History:
A two-month-old girl was presented, complaining of the inability to open her right eye completely. A sonography was performed and it demonstrated the existence of a conical projection on the posterior surface of the crystalline lens.

Imaging Findings:
A two-month-old girl was brought by her parents to the Pediatric Ophthalmology Service of our hospital, because they had noticed that their daughter could not open her right eye completely. During clinical exploration, an asymmetrical opening of the eyes was observed. Funduscoppy could not be done due to the lack of pupil dilatation. For that reason, a sonography was performed. The right eye sonography performed with 7–15 MHz transducer and a Philips HDI 5000 equipment (Philips, Eindoven, Netherlands) showed a right eye microphthalmos and the presence of a small conical projection on the posterior surface of the crystalline lens (Fig. 1). The left eye was found to be normal (Fig. 2). In a follow-up examination done, six months later, sonography showed the existence of a cataract (Fig. 3). The final diagnosis was that of a posterior lenticonus associated with microphthalmos and anterior chamber hypoplasia.

Discussion:
Posterior lenticonus is an infrequent congenital defect of the crystalline lens capsule, which produces a small conical projection on its posterior surface. The age of presentation is normally during the early childhood, and it is not associated with systemic illness. In most of the patients, this anomaly occurs unilaterally and sporadically. When bilateral, an autosomal dominant inheritance is suggested. The prevalence is estimated to be in 1–4 over 100000 children, and there is no predilection for either sex. The pathogenesis of posterior lenticonus is unknown. Posterior capsule traction by the hyaloid artery's remnants, as well as alterations in the tunica vasculosa lentis, has been suggested as a possible caus. The lenticonus can also appear on the anterior surface of the crystalline lens. In these cases the affection is bilateral and is related with Alport Syndrome, which consists of progressive kidney failure, sensorineural deafness and ocular manifestations. The posterior defect increases progressively in size and it can be associated with subcapsular cataract. The treatment is based on the surgical lens aspiration on the intraocular lens implantation, and on the posterior amblyopia management. The visual prognosis is favourable in most of the cases. In our patient, since the posterior lenticonus was associated with microphthalmos and anterior chamber hypoplasia, no surgical operation was made.

Differential Diagnosis List: Posterior lenticonus with microphthalmos.
**Final Diagnosis:** Posterior lenticonus with microphthalmos.

**References:**


Gibbs ML, Jacobs M, Wilkie Ao, Taylos D. Update on a child with bilateral posterior lenticonus. (PMID: [7636692](https://doi.org/10.1016/S0006-8993(01)76366-9))

Description: A transverse sonography scan showing hypoplasia of the anterior chamber (indicated by an arrowhead), and an echogenic conical projection of the posterior lens capsule (indicated by an arrow) in the right eye. Origin:
Description: A transverse sonography scan showing hypoplasia of the anterior chamber (indicated by an arrowhead), and an echogenic conical projection of the posterior lens capsule (indicated by an arrow) in the right eye. Origin:
Description: A transverse sonography scan showing normal posterior lens capsule (indicated by an arrow) in the left eye. Origin:
Description: A transverse sonography scan showing normal posterior lens capsule (indicated by an arrow) in the left eye. Origin:
Description: A transverse sonography scan acquired six months later reveals a mature cataract.

Origin:
Description: A transverse sonography scan acquired six months later reveals a mature cataract.

Origin: