

Contact lens fitting in crystalline lens displacement: report of two cases

Marcelo Vicente de Andrade Sobrinho, MD; Giovanna Soares Nutels; Henrique Sampaio Ferreira, MD

Department of Ophthalmology, Pontifical Catholic University of Campinas, São Paulo, Brazil – e-mail: marcelosobrinho@terra.com.br

Background/Introduction

- Ectopia lentis is the displacement of the lens from its primary position. The lens may be completely dislocated (luxated) or partially (sub-luxated). Ectopia lentis can be acquired as trauma or related to syndromes, metabolic diseases or genetic diseases such as Marfan syndrome, homocystinuria and Weil-Marchesani syndrome. Traumatic etiology is the most common in adults.
- The physiopathology is related to the disturbance of the zonular fibers. Displacement of the lens can cause many problems, e.g., anisometropia, diplopia, refractive errors, as well as amblyopia.
- We present two cases of lens displacement managed with contact lens (CL) fitting.

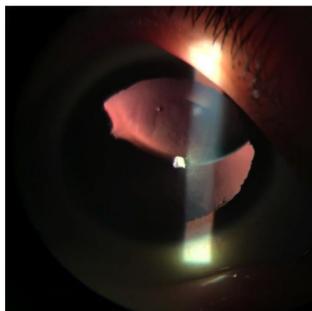


Figure 1. Crystalline displaced superiorly in the right eye.

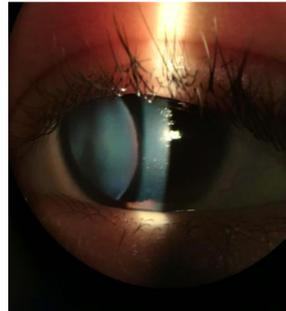


Figure 2. Crystalline displaced nasally in the left eye.

Cases Description

Case 1: A.J.C.B., female, 6 years old. According to family members, has poor vision since birth. Her parents are 1st degree cousins.

Ophthalmologic examination:

- Visual acuity (VA): OU 20/200.
- Biomicroscopy: Both lenses were subluxated; OD superior nasally and OS nasally (figures 1 and 2).
- Fundoscopy: attached retina, physiological cupping of the optic nerve and preserved macula.
- Spherical rigid gas permeable contact lenses (RGPCL) were fitted (figures 3 and 4).
- In both eyes, the diameter was 8.8mm, the base curve (BC) was 46.00 D, and the dioptric power was +20.00 in OD and +10.00 in OS, reaching visual acuity of 20/40 in OU.

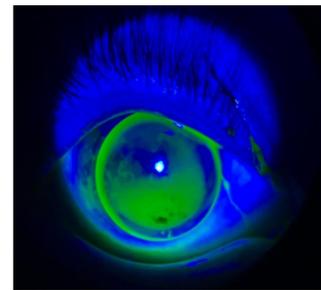


Figure 3. Right eye adapted lens.

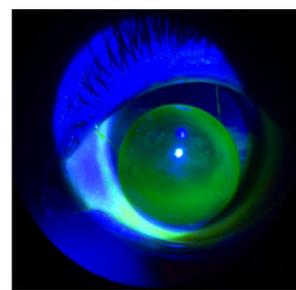


Figure 4. Left eye adapted lens.

Cases Description

Case 2: A.P.S., male, 57 years old. This patient had bilateral aphakia due to intracapsular lenses extraction after spontaneous dislocation of the lenses to the anterior chamber.

Ophthalmologic examination:

- VA: counting fingers (CF).
- Biomicroscopy: Bilateral aphakia, corectopia and iridotomy in OS.
- Spherical RGPCL were fitted (figure 5).
- In both eyes, the diameter was 9.6mm. The BCs were: OD 43.00 D and OS 42.00 D, and the dioptric power was +14,50 in OD and +14,75 in OS, reaching VA of 20/25 in OD and 20/30 in OS.

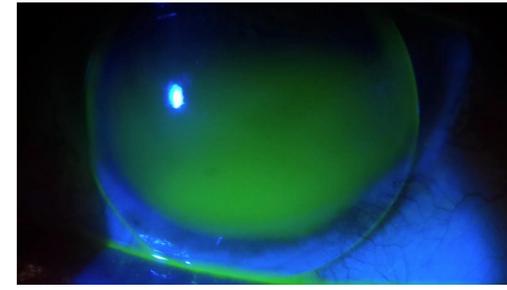


Figure 5. Fluorescein pattern of contact lens fitting.

Discussion/Conclusions

- The management of lens dislocation is a challenge, specially in children.
- In the first case, if we consider the age of the patient, surgery would expose the child to a number of complications, such as aphakia, uveitis, posterior and anterior synechiae, secondary glaucoma, retinal detachment and others. The use of CL is an alternative to delay surgery until she reaches an age where complication rates are smaller. Contact lens are able to deliver a satisfactory VA in order to develop the vision pathways and avoid amblyopia.
- In the second case, CL fitting was also useful, not only because it provided good VA, but it gave better aesthetics to the patient, since his eyeglasses were very thick and heavy.

References

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- SIMON, Melissa A et al. New Management Strategies for Ectopia Lentis. v. 52, n. 5, p. 269–281, 2015.