

Spontaneous Dislocation of a Transparent Lens to the Anterior Chamber – A Case Report

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SUMMARY

Introduction The causes leading to dislocation of the natural lenses are different involving injuries, hereditary diseases and spontaneous dislocation. Spontaneous dislocation of a transparent natural lens is extremely rare, especially dislocation of the anterior eye chamber. We report a case of spontaneous dislocation of the transparent natural lens to the anterior eye chamber in a patient who had no history of eye injuries.

Case Outline The patient was a 17-year old boy. Lens dislocation was spontaneous, and the patient presented for ophthalmological consultation due to a sudden vision impairment of the left eye. Biomicroscopic examination verified that the transparent lens was in the anterior chamber, and it was spherophakia of lesser diameter; there were no signs of increased intraocular pressure, as typically expected in lens dislocation to the anterior chamber. The patient was operated on in general anaesthesia. Surgery involved intracapsular extraction of the dislocated lens through a corneoscleral incision.

Conclusion This case report shows that a spontaneous dislocation of the natural lens may occur in younger people. The dislocated spherophakic lens to the anterior eye chamber did not contribute to the rise of the intraocular pressure and development of acute glaucoma. The acute glaucoma resulted from the pilocarpine narrowing of the pupil due to pupillary block. The intracapsular instrumental extraction of the dislocated transparent lens from the anterior chamber was successfully completed through a corneoscleral incision.

Keywords: lens dislocation; anterior eye chamber; spherophakia; surgery

INTRODUCTION

There are various reasons for a dislocation of a crystalline lens: trauma, hereditary disorders including Marfan's syndrome, homocystinuria, spherophakia, retinopathia pigmentosa, but there are also cases of spontaneous luxation [1, 2, 3]. Spontaneous dislocation of a clear lens is extremely rare, especially luxation to the anterior chamber. We are presenting a case of spontaneous luxation of a spherophakic lens to the anterior chamber and the method of its surgical removal.

CASE REPORT

A 17-year-old boy complained of a sudden deterioration of vision in his left eye two months prior to admission. He had no pain. On admission, the best corrected visual acuity in his right eye was 1.0 (with -10.0 D sph), and only 0.1 (with -7.0 D sph) on the left side. Intraocular pressure was normal (13 mm Hg right and 14 mm Hg left). Axial length of both eyeballs, measured by ultrasound, was normal (23.37 mm right and 23.21 mm left). By slit lamp examination, a luxated transparent lens was found in the anterior chamber in his left eye (Figure 1). Ocular media were transparent and fundus appearance was normal on both sides. There was no trauma in the history.

We decided to remove the luxated lens surgically through a corneoscleral incision under

general anaesthesia. Fifteen minutes before surgery 1% Pilocarpine solution was administered topically in order to narrow the pupil and to prevent possible movement of the lens to the vitreous, due to the horizontal position of the relaxed patient. However, soon after Pilocarpine administration, just before the introduction of general anaesthesia, the patient complained of serious pain in his left eye and the left hemi cranium; an immediate slit lamp check readily revealed clinical signs of a pupillary block (Figure 2), with "iris bombe", ciliary hyperaemia and a significant raise of intraocular pressure.

Surgically, the conjunctiva was opened, a corneoscleral incision in the sector from 11 to 2 o'clock was done and the lens was carefully removed instrumentally. A preventive basal iridectomy at 12 o'clock followed. The surgical wound was closed by a running return Nylon 10.0 suture, while the anterior chamber was restored by air (Figure 3). The removed lens was



Figure 1. Preoperative photograph of the left eye shows the crystalline lens in the anterior chamber, semimydriasis and a completely steady eye

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Figure 2. Photograph of the patient on the operating table immediately before operation shows inception acute glaucoma due to pupillary block; ciliary hyperaemia, iris bombe, semimydriasis

clear and spherical in shape (Figure 4). Four months after surgery the corrected visual acuity was 1.0.

DISCUSSION

Luxation of the crystalline lens is a consequence of trauma in some 50% of all cases [2, 4]. Hereditary cases have been reported, usually associated with systemic disturbances, such as Marfan's syndrome, homocystinuria, Wiell-Marchesani syndrome, and some cases of spontaneous luxation [1-8].

Our case is of interest because the lack of trauma in the history and absence of any systemic disorder. Our patient was myopic (although he never used glasses being satisfied with the quality of uncorrected vision). Luxation of the lens to the anterior chamber was spontaneous.

Luxation of the lens to the anterior chamber usually causes complications, such as corneal edema, acute glaucoma attack caused by a pupillary block, or an anterior uveitis, so that surgical removal of a dislocated lens should be done as soon as possible [1-6]. Joffe et al. [4] suggest an intracapsular extraction through a limbal incision, while Peyman et al. [9] recommend vitrectomy with scleral incision. Choi et al.

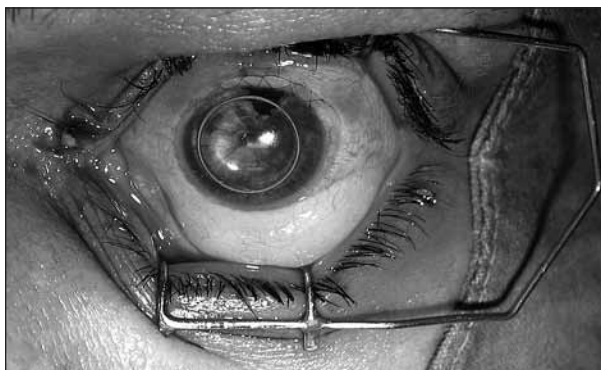


Figure 3. Photograph of the patient on the operating table at the end of operation; corneoscleral suture, basal iridectomy, air bulla in the anterior chamber of the eye, narrow pupil



Figure 4. Appearance of extracted lens; capsula saved, transparent, round (spherophakia)

[2] and Seong et al. [10] suggest phakoemulsification with anterior vitrectomy.

In our case, we did instrumental intracapsular extraction through a corneoscleral incision. Since there was no vitreous in the anterior chamber, no vitrectomy was needed. We made a 12 o'clock basal iridectomy, just in case. Postoperative recovery was uneventful, fast and successful.

The extracted lens was spherical in shape and clear. The spherical shape of the lens (spherophakia) was the reason for refractive myopia in our patient, with normal axial lengths, so that aphakic correction of +10.0 D sph was appropriate. We did not implant any artificial lens in the hope that such a young person will accept a contact lens aphakic correction without difficulties, which proved to be true four months following surgery, with a corrected visual acuity 1.0 of the eye.

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Спонтана дислокација провидног сочива у предњу очну комору: приказ болесника

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КРАТАК САДРЖАЈ

Увод Узроци који дислоцирају природно сочиво су различити: повреде, наследна обољења, спонтана дислокација. Спонтана дислокација провидног природног сочива је изузетно ретка, посебно дислокација у предњу очну комору. Приказујемо случај младића са спонтаном дислокацијом сочива који претходно није имао повреду ока.

Приказ болесника Седамнаестогодишњи младић се јавио офталмологу због изненадног слабљења вида на левом оку. Прегледом биомикроскопом установљено је да се провидно сочиво налази у предњој очној комори, да је реч о сферофакији, да је сочиво мањег пречника и да на оку не постоје знаци акутног повећања интраокуларног притиска (што се очекује када

се сочиво дислоцира у предњу очну комору). Болесник је оперисан у општој анестезији, при чему је урађена интракапсуларна екстракција луксираниог сочива кроз корнеосклерални рез.

Закључак Овим приказом је показано да спонтана дислокација природног провидног сочива може настати и код младих особа. Само по себи луксирано сферофакно сочиво у предњу очну комору није довело до повећања интраокуларног притиска и настанка акутног глаукома. Акутни глауком је изазван после сужавања зенице пилокарпином услед развоја пупиларног блока. Интракапсуларна екстракција луксираниог провидног сочива из предње очне коморе је успешно изведена.

Кључне речи: дислокација сочива; предња очна комора; сферофакија; операција

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