

LENS DISLOCATION



Salvador Dali, book signing: Black and White Fish Eye Lens photograph, Philippe Halsman, 1963.

"At the age of six I wanted to be a cook. At seven I wanted to be Napoleon. And my ambition has been growing steadily ever since"

"There are some days when I think I'm going to die from an overdose of satisfaction."

"Surrealism is destructive, but it destroys only what it considers to be shackles limiting our vision".

"What is a television apparatus to man, who has only to shut his eyes to see the most inaccessible regions of the seen and the never seen, who has only to imagine in order to pierce through walls and cause all the planetary Baghdads of his dreams to rise from the dust."

"Since I don't smoke, I decided to grow a mustache - it is better for the health. However, I always carried a jewel-studded cigarette case in which, instead of tobacco, were carefully placed several mustaches, Adolphe Menjou style. I offered them politely to my friends: "Mustache? Mustache? Mustache?" Nobody dared to touch them. This was my test regarding the sacred aspect of mustaches."

"I don't do drugs. I am drugs."

"The thermometer of success is merely the jealousy of the malcontents."

"One day it will have to be officially admitted that what we have christened reality is an even greater illusion than the world of dreams."

"The difference between false memories and true ones is the same as for jewels: it is always the false ones that look the most real, the most brilliant."

"I am not strange. I am just not normal."

"Give me two hours a day of activity, and I'll take the other twenty-two in dreams."

"Each morning when I awake, I experience again a supreme pleasure: that of being Salvador Dali."

Quotes from the enigmatic Salvador Dali, (1904-1989).

We interpret the world through the lens of our senses and experiences and innermost psyche - in this regards it is fascinating to contemplate the brilliant and enigmatic Salvador Dali - a life lived through a seemingly quite dislocated lens!

LENS DISLOCATION

Introduction

Dislocation of the lens of the eye most commonly occurs as a result of trauma.

Occasionally it can occur secondarily as a result of local ocular abnormalities or hereditary systemic disease.

The lesser injury of lens **subluxation**, may not given significant symptoms to the patient and so may go largely unnoticed.

Some minor subluxation may be treated conservatively, if vision is not impaired.

Complete dislocations can disrupt vision and result in secondary complications and so will require treatment.

Classification:

The degree of zonular fibre impairment determines the degree of lens displacement.

Displacements of the lens of the eye can therefore be classified as:

- Partial (or subluxed):
 - ♥ There is partial disruption of zonular fibres
- Complete (or dislocated):
 - ♥ There is complete disruption of zonular fibres
 - ♥ The lens can dislocate into the anterior or posterior chamber of the eye.

History

Berryat was the first to describe a case of lens dislocation in 1749.

Stellwag coined the term ectopia lentis in 1856, when describing a patient with a congenital lens dislocation.

Pathology

Causes:

The principle causes of lens dislocation include:

1. Traumatic:

- Note that patients who have undergone cataract surgery have a lens implant instead of a “native” lens, but either kind of lens, native or lens implant, can become dislocated.
2. Secondary to intrinsic ocular disorders:
 - Coloboma of the lens
 - Congenital dislocated lens.
 3. Secondary to some hereditary systemic diseases:
 - Homocystinuria
 - Marfan’s syndrome
 - Weil-Marchesani syndrome

Complications:

These include:

- Loss of visual acuity (predominantly in the cases of complete dislocations, the degree of visual disturbance will vary directly with the degree of lens disruption)
- Cataracts
- Iritis/ uveitis
- Secondary glaucoma

Clinical features

Minor partial dislocations or subluxations may not be noticed by the patient.

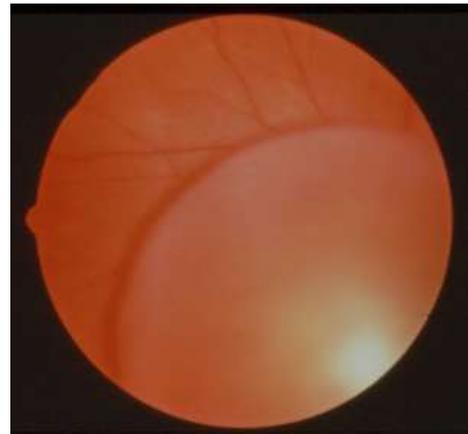
Features of a lens dislocation include:

1. Red painful eye (in traumatic cases)
2. Loss of visual acuity:

A full dislocation - in which the lens floats free in the vitreous – can cause visual defects, in particular:

- Decreased distance visual acuity (secondary to astigmatism or myopia)
- Poor near vision (loss of accommodative power)
- Monocular diplopia

3. Iridodensis:
 - This is a quivering of the margins of the iris when the patient moves the eye.
 - It indicates loss of lens support and is particularly marked when the dislocation is complete.
4. Slit lamp examination:
 - The lens position can best be evaluated via a slit lamp examination.
5. Look also for associated injuries that are seen in blunt eye injuries, such as hyphema or retinal detachments. Ultrasound examination may more readily determine the presence of an associated retinal detachment.



Left: A dislocated lens as seen via a slit lamp. Right: A dislocated lens into the vitreous seen on funduscopy, secondary to trauma

Investigations

Ultrasound:

B-scan ultrasound (brightness scan) of the eye is useful when direct fundoscopic visualization of intraocular structures is difficult or impossible, (from hyphemas, corneal changes or cataracts for example).

It can detect the presence of vitreous hemorrhages or retinal detachments.

CT Scan/ MRI scan:

These are also very good at detecting vitreous hemorrhages or retinal detachments.

In cases of trauma these can also more fully define the extent and nature of injury to the globe, as well as associated orbital structures.

Management

In cases of traumatic lens dislocation of the eye:

- Lens dislodged into the anterior chamber:

Treatment may initially be pharmacological with mydriasis/cycloplegia (to permit posterior migration of the lens behind the iris) in conjunction with ocular massage through a closed lid to promote this posterior migration.

Surgical treatment will then be needed to prevent further complications.

- Lens dislodged into the vitreous:

Treatment of a lens dislocated into the vitreous is usually surgical; however, some Ophthalmologists may advocate a period of initial observation if no visual disturbance or impending retinal complication is apparent.

Lens surgery in cases ectopia lentis is technically challenging, and numerous techniques and strategies have been utilized. A lensectomy may be required.

Disposition:

All suspected cases of lens dislocation of the eye should be referred to an Ophthalmologist.

References

1. Charles W Eifrig et al. Ectopia Lentis, eMedicine July 12, 2013.
2. <http://www.ophtalmicphotography.info>

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