SYNKINETIC LID RETRACTION*

BY

N. S. JAIN

Department of Ophthalmology, Irwin Hospital, New Delhi, India

ABNORMAL lid retraction of the upper eyelid in congenital ptosis and acquired oculomotor ophthalmoplegia in the phase of its recovery does not appear to be as uncommon as the literature indicates.

The nine cases described in this paper are summarized in the Table.

TABLE

Case No.	Age at Onset (yrs)	Sex	Cause of Ophthalmoplegia	Manifestation
1	47	F	Subarachnoid haemorrhage	Fuchs's phenomenon of lid retraction on adduction Pseudo-Graefe phenomenon of lid retraction on looking down
2	1½	F	Typhoid	Paradoxical retraction on occlusion of sound eye
3	5	M	Head injury	Lid retraction on attempted adduction Pseudo-Graefe phenomenon of lid retraction on looking down Paradoxical retraction on occlusion of sound eye
4	56	M	Syphilis	Lid retraction on attempted adduction
5	Birth	F	Congenital	Lid retraction on occlusion of sound eye
6	Birth	F	Congenital	Duane's retraction syndrome
7	52	M	Myasthenia gravis	Prostigmine-positive lid retraction (uncommon type)
8	Birth	F	Congenital	Lid retraction on attempted adduction and on occlusion of sound eye
9	Birth	F	Congenital	Marcus Gunn phenomenon (even clenching the teeth on the right side with closed mouth caused retraction)

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Case Reports

Case 1, a female aged 47 years, first seen on July 28, 1956, developed ophthalmoplegia on the left side following subarachnoid haemorrhage due to a sudden rise in blood pressure in January, 1956. Since then there had been a progressively satisfactory recovery and diplopia persisted only on looking upwards. In the primary position a narrowing of the palpebral aperture was noticed on the left side (Fig. 1A). Elevation of the left globe was defective but all other movements were normal (Fig. 1B). On looking down a pseudo-Graefe phenomenon of lid-retraction was present (Fig. 1C). On looking to the right (*i.e.* on attempted adduction), a wider left palpebral aperture and an exaggerated skin-fold of the eyelid indicated lid retraction (Fig. 1D). The right eye was normal in all respects.

FIG. 1.—Case 1, a female aged 47.

Case 2, a girl aged 5 years, first seen on August 1, 1956, had suffered from typhoid at the age of one year and three months, since when a ptosis of the left upper eyelid had persisted. There was ptosis on the left side in the primary position (Fig. 2A). On occlusion of the right eye, paradoxical lid retraction was present (Fig. 2B). Elevation of the globe was absent on the left side (Fig. 2C). On looking to the right, *i.e.* on attempted adduction, retraction of the left lid was noticeable (Fig. 2D). The right eye was normal.

FIG. 2.—Case 2, a girl aged 5.

Case 3, a boy aged 12, first seen on August 2, 1956, had sustained an injury to the right side of his head by falling on to a hard floor from a height of 16 feet at the age of 5 years. On regaining consciousness after 3 days, he was discovered to have developed ptosis of the right upper eyelid and incomplete movements of the eyeball in all directions. In the following 3 months a certain degree of improvement took place, whereafter the condition remained unchanged. There was ptosis on the right side in the primary position (Fig. 3A). On occlusion of the left eye there was paradoxical lid retraction (Fig. 3B). On looking to the right the ptosis increased (Fig. 3C). Elevation of the right globe was absent and the eye was slightly abducted (Fig. 3D). Adduction of the right eye was absent, and on testing it a retraction of the right lid was seen (Fig. 3E). The pseudo-Graefe phenomenon of lid retraction was present on downward movement of the eyeball (Fig. 3F). The left eye was normal in all respects. In the right eye the vision was reduced to counting fingers at two metres distance, the optic disc was normal, and the pupil was completely paralysed.

FIG. 3.—Case 3, a boy aged 12.

Case 4, a male aged 56 years, first seen on August 3, 1956, had suddenly developed total ophthalmoplegia in June, 1956. The general history of the case, confirmed by a positive serological test, proved syphilis to be the cause. All signs of oculomotor ophthalmoplegia

were absent in the primary position (Fig. 4A). The sixth nerve was paralysed and abduction was absent in the left eye. A wider left palpebral fissure showed a slight but distinct lid retraction (Fig. 4B).

FIG. 4.—Case 4, a male aged 56.

Case 5, a girl aged 15 years, came to hospital on August 10, 1956, for a cosmetic correction of congenital ptosis on the right side. Ptosis was present on the right side in the primary position (Fig. 5A). Elevation of the right globe was absent (Fig. 5B). Paradoxical lid retraction of the right upper eyelid was present on occlusion of the left eye (Fig. 5C).

FIG. 5.—Case 5, a girl aged 15.

Case 6, a girl aged 4 years, was brought to hospital for correction of a convergent squint of about 25° . Examination revealed that this was a case of Duane's retraction syndrome. Abduction of the left eye was absent, and on testing it the left palpebral aperture showed a widening due to lid retraction (Fig. 6A). On looking to the right, adduction of the left eye was restricted, but the globe showed elevation; there was a narrowing of the left palpebral aperture and enophthalmos (Fig. 6B). Recession of the internal rectus was performed, and the cosmetic parallelism of the visual axes in the primary position was excellent (Fig. 6C).

FIG. 6.—Case 6, a girl aged 4.

Case 7, a male aged 52 years, first seen on September 24, 1956, had developed ptosis of the right eyelid 4 months previously. He recovered automatically in 3 weeks without any treatment. He then developed ptosis on the left side, and all laboratory investigations were negative (Fig. 7A).

The patient was made to rest for 10 minutes (or was made to keep looking down on a near object as if reading). After this (or in the morning after sleep), when the patient was asked to look up suddenly, there was a retraction of the ptosed left eyelid (Fig. 7B). Ptosis re-appeared gradually within 5 minutes and the left eye closed completely even while the right eye continued to look upwards (Fig. 7C). An injection of 1 mg. prostigmine showed the retraction of the left eyelid to be due to myasthenia gravis. All other symptoms of the disease were absent (Fig. 7D).

FIG. 7.—Case 7, a male aged 52.

Case 8, a female aged 45 years, first seen on September 29, 1956, had ptosis of the right eyelid dating from birth (Fig. 8A). Adduction was normal on the right side, but looking to the left caused retraction of the right upper eyelid (Fig. 8B). Occlusion of the left eye caused a paradoxical retraction of the right upper eyelid (Fig. 8C).

FIG. 8.—Case 8, a female aged 45.

Case 9, a female aged 32 years, first seen on October 23, 1956, was a typical case of the Marcus Gunn phenomenon. There was congenital ptosis of the left eyelid (Fig. 9A). On opening the jaw there was lid retraction on the left side (Fig. 9B). With a closed mouth, if the patient clenched her teeth on the right side, or moved the lower jaw to the right, there was retraction of the left eyelid (Figs 9C and 9D). The ptosis was enhanced when the lower jaw was moved to the left (Fig. 9E).

FIG. 9.—Case 9, a female aged 32.

Discussion

Abnormal lid retraction of several types was seen in the nine cases described above. In three cases (1, 3, and 8) more than one variety was seen.

Paradoxical lid retraction on occlusion of the sound eye was congenital in two cases (5 and 8) and was an acquired lesion in two others (2 and 3), in which it was due to typhoid and head injury respectively.

Fuchs's phenomenon of retraction on attempted adduction was present in Case 8 (congenital) and also in Cases 1, 2, and 3 (in which it was due to subarachnoid haemorrhage, typhoid, and head injury, respectively). The condition was present on attempted abduction in one case of ophthalmoplegia after syphilis (Case 4).

The pseudo-Graefe phenomenon was not seen as a congenital lesion in this series, but occurred in two cases (1 and 3) after subarachnoid haemorrhage and head injury respectively.

The Marcus Gunn phenomenon (Case 9), Duane's retraction syndrome (Case 6), and myasthenia gravis (Case 7) were also seen as single entities.

Case 3 deserves special mention, since it presents an example of Fuchs's phenomenon and the pseudo-Graefe phenomenon combined, with paradoxical lid retraction on occlusion of the sound eye. This rare combination does not appear to have been reported in the literature.

Summary

Nine cases of abnormal lid retraction are reported, the lesions being congenital in four cases, and acquired in five cases.

REFERENCE

FUCHS, E. (1893). *Beitr. Augenheilk.*, 2, 12 (Heft 11, p. 12).