BLASCOVICZ OPERATION IN A CASE OF MARCUS GUNN PHENOMENON*

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CONGENITAL ptosis in association with jaw-winking is a clinical entity in which the ptosis disappears and the lid retracts on opening the mouth, or on moving the jaw to the opposite side. This condition, known as the Marcus Gunn phenomenon (Gunn, 1883), has been noted in association with paralysis of the superior rectus (Proskauer, 1891; Goldzeiher, 1892), internal rectus (Uhthoff, 1888), external ophthalmoplegia (Vossius, 1892; Spaeth, 1947), voluntary nystagmus (Soria, 1947), and congenital convergent strabismus (Garkal, 1961).

In the following case jaw-winking was associated with left hypotropia in the primary position and upshoot of the right eye on laevoversion.

Case Report

A 20-year-old Hindu male had complete congenital ptosis with Marcus Gunn phenomenon on the left side (Fig. 1). Retraction of the left upper lid occurred on opening the mouth (Fig. 2) and on looking to the right (Fig. 3).

FIG. 1.—Left ptosis.

FIG. 2.—Left lid raised on opening mouth.

FIG. 3.—Left lid raised on looking right.

On laevoversion there was upshoot of the right eye (Fig. 4), indicating overaction of the right inferior oblique. In the primary position hypotropia of the left eye was seen when the lids were raised (Fig. 5). The eye movements were otherwise normal.

FIG. 4.—Right eye shoots up on looking left.

FIG. 5.—Left hypotropia seen when lids raised.

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Treatment.—A Blascovitz operation was performed and an 8-mm. resection of the left levator was carried out.

Result.—The correction of the ptosis was followed by the disappearance of the left hypotropia (Fig. 6), the upshoot of the right eye on laevoversion (Fig. 7), and the retraction of the left lid on opening the mouth (Fig. 8).

FIG. 6.—Left eye straight after correction of ptosis.

FIG. 7.—Right eye no longer shoots up on looking left.

FIG. 8.—Left lid unaffected by opening mouth.

Discussion

This condition is of uncertain aetiology, but may be due to abnormal innervation of the levator palpebrae superioris from fibres arising from the motor nucleus of the fifth nerve together with those of the muscles of mastication. This connexion has been variously suggested at supranuclear, intranuclear, and infranuclear levels. A functional interference by irritation or by the release of inhibition with the relatively unknown paths of communication between the cortical and sub-cortical centres has also been suggested.

In minimal cases no treatment may be necessary (Duke-Elder, 1952), or the ptosis may be initially corrected by surgery of the frontalis or superior rectus muscle (Schimek, 1959), but in severe cases it is generally agreed that the levator tendon should be completely severed from the lid and the superior rectus or frontalis then used to correct the ptosis (Farnarier, 1947; Spaeth, 1947; Berke, 1949; Patel, 1950; Callahan, 1956; Schimek, 1959). Grant (1936) suggested section of the motor root of the fifth nerve.

The Marcus Gunn phenomenon has been reported to appear after surgery (Simpson, 1956; Dhir and Agarwal, 1961).

In our case it was decided to try resection of the levator before doing the complete tenotomy recommended by various authors. To our surprise, not only did the ptosis and Marcus Gunn phenomenon disappear but the associated ocular anomaly was automatically corrected. This method may therefore prove useful in the treatment of jaw-winking, particularly when associated with oculomotor anomalies; it follows that the associated condition should not be treated before the ptosis has been corrected.

Summary

In a case of Marcus Gunn phenomenon there was hypotropia of the left eye (on the same side) in the primary position and upshoot of the right eye on laevoversion.

A Blascovicz operation corrected the ptosis, jaw-winking, and the oculomotor anomaly.

Resection of the levator should be tried in cases of Marcus Gunn phenomenon, particularly when associated with oculomotor anomaly, and treatment of the ocular condition should be postponed until after the correction of the ptosis.

REFERENCES

- BERKE, R. N. (1949). *Arch. Ophthal. (Chicago)*, **41**, 188.
 CALLAHAN, A. (1956). "Surgery of the Eye". Thomas, Springfield, Ill.
 DHIR, B. K., and AGARWAL, M. L. (1961). *J. Indian med. Ass.*, **37**, 235.
 DUKE-ELDER, S. (1952). "Text-book of Ophthalmology", vol. 5, p. 4688. Kimpton, London.
 FARNARIER, M. G. (1947). *Rev. oto-neuro-oftal. (B. Aires)*, **19**, 127.
 GARKAL, R. S. (1961). *Brit. J. Ophthal.*, **45**, 566.
 GOLDZIEHER, W. (1892). *Zbl. prakt. Augenheilk.*, **16**, 361. (Cited by Duke-Elder, 1952).
 GRANT, F. C. (1936). *Arch. Neurol. Psychiat. (Chicago)*, **35**, 487.
 GUNN, R. M. (1883). *Trans. ophthal. Soc. U.K.*, **3**, 283.
 PATEL, V. P. (1950). *J. Indian med. Ass.*, **19**, 371.
 PROSKAUER, T. (1891). *Zbl. prakt. Augenheilk.*, **15**, 97. (Cited by Duke-Elder, 1952).
 SCHIMEK, R. A. (1959). *Trans. Amer. Acad. Ophthal. Otolaryng.*, **63**, 666.
 SIMPSON, D. G. (1956). *A.M.A. Arch. Ophthal.*, **56**, 743.
 SORIA, A. (1947). *Arch. Soc. oftal. hisp-amer.*, **7**, 325.
 SPAETH, E. B. (1947). *Amer. J. Ophthal.*, **30**, 143.
 UHTHOFF, W. (1888). *Berl. klin. Wschr.*, **25**, 721. (Cited by Duke-Elder, 1952).
 VOSSIUS, A. (1892). *Beitr. Augenheilk.*, **1**, No. 4, 281. (Cited by Duke-Elder, 1952).