MARCUS GUNN PHENOMENON*†

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SINCE the jaw-winking phenomenon was first described by Marcus Gunn (1863), many such cases with other associated findings have been reported. Falls, Krause, and Cotterman (1949) reviewed 115 cases, Simpson (1956) published a comprehensive study, and Dhir and Agarwal (1961) reported a case following ptosis surgery. This case is reported because of an associated peculiarity which does not appear to have been mentioned in the literature.

Case Report

An 18-year-old male medical student sought advice for a drooping of the left upper lid which moved as he moved his jaw. The condition had been present since birth. There was nothing of significance in his past history or that of his family.

Examination.—There was ptosis of the left upper lid covering 5 mm. of the cornea in the primary position. The palpebral fissure measured 4 mm. in the centre, and there was a fold in the lid 4 mm. above the margin (Fig. 1). There was a left hypotropia of 5° in this position. The levator action was 9 to 10 mm.

There was paresis of the left superior rectus muscle. On looking up the left eyeball did not move, while the left upper lid rose by 2 mm. and the left hypotropia increased to 20°. The prominence of the lid fold did not alter. When the patient opened his mouth, the left upper lid retracted so that the lid margin rose 2 mm. above the limbus, the palpebral fissure increased in size to 11 mm. at the centre, and the lid fold became very prominent (Fig. 2).

Moving the jaw to the affected side caused ptosis and towards the opposite side elevation of the lid.

The size and reaction of both pupils was similar and normal. Bell's phenomenon was not present.

Intermittent contractions of the right upper lid were elicited when the patient closed his eyes while his mouth was open. The contractions ceased as soon as the mouth was closed. No such contractions were seen in the affected left upper lid.

The visual acuity in the right eye was 6/6 and in the left eye 3/60; there was no refractive error and this marked diminution of vision was due to amblyopia.

Operation.—A Berke Motaïs operation was carried out. The consequent improvement is shown in Figs 3 and 4. The action of the paretic superior rectus did not improve very much (Fig. 5), but the intermittent contractions of the right upper lid disappeared after the operation.

Discussion

Spaeth (1947) estimated that this synkinetic movement of the lid and jaw occurs in 2 per cent. of all cases of congenital ptosis; males are more commonly affected than females and the left eye is involved more frequently than the right. The unusual feature of the present case was that, when the patient kept his mouth open and closed his eyes, there were spastic contractions of the right upper lid. These vanished as soon as the patient closed his mouth.

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FIG. 1.—Eyes in primary position, showing left ptosis.

FIG. 2.—Lid retraction on opening mouth.

FIG. 3.—Eyes in primary position after operation, showing improvement on ptosis.

FIG. 4.—Position of lids on opening mouth after operation.

FIG. 5.—Postoperative persistence of left superior rectus paresis.

This finding is difficult to explain; it may be due to an atavistic reversion, as suggested by Harman (1903), or to an abnormal central neural connexion.

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