



## Marcus Gunn Phenomenon

**A** 1-month-old boy presented with left ptosis. His mother reported that eyelid drooping was detected within a few days after birth. The child was the product of nonconsanguineous parents, and he was born after a normal pregnancy at full term by cesarean delivery with no history of trauma. On physical examination, the infant displayed rhythmic elevation of the left eyelid occurring consistently when he sucked on a pacifier. The upper eyelid was elevated completely with each suck and returned to a mild ptotic alignment between sucks, with otherwise-normal findings on physical and neurologic examinations (**Videos 1** and **2** and **Figure**; **Videos** available at [www.jpeds.com](http://www.jpeds.com)). Marcus Gunn phenomenon (MGP) was diagnosed, and the patient was referred to an ophthalmologist.

First described more than 100 years ago by Scottish ophthalmologist Robert Marcus Gunn, this condition is characterized by ptosis associated with synkinetic “winking” movement of the upper eyelid and masticating movements of jaw.<sup>1</sup> The etiology of MGP is not understood. It is thought to result from an abnormal branch of the trigeminal nerve, which has been misdirected congenitally to the oculomotor nerve supplying the levator muscle, but other theories have been suggested, including genetic predisposition and phylogenetic atavism. Although most cases of MGP are considered to be congenital, acquired forms exist, due to complications of surgery, trauma, infection, and pontine tumors.<sup>2</sup>

Although usually present at birth, MGP can occur at a wide range of ages. Bilateral cases have been reported, but most are unilateral and occur more frequently on the left. The movement can be triggered by chewing, suction, lateral mandibular movement, smiling, sternocleidomastoid contraction, protruding tongue, Valsalva maneuver, and even breathing. MGP jaw winking synkinesis has been reported in 2%-13% of patients with congenital ptosis.<sup>3,4</sup>

Treatment may include surgery in severe but rare cases, depending on the degree of ptosis. There can be a high frequency of strabismus and amblyopia, and occasionally the disorder can occur with retinitis pigmentosa, Duane syndrome, and other rare eye conditions, so ophthalmologic evaluation is mandatory to prevent vision loss and rule out related abnormalities.<sup>5</sup> ■

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**Figure.** Elevation of the left eyelid due to suction.

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### References

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