Marcus Gunn Syndrome

Josias Pires Ferreira, MD
João Marcos Boechat C. Rocha, MD
Luiz Carlos Avelino Jr., MD
Otávio Augusto Vilhena Atallah, MD

2] ENT Residents of Clínica Prof. José Kós.

Study performed at the Study Center of the Clínica Prof. José Kós.

Address for correspondence:
Josias Pires Ferreira, MD
Av. Almirante Barroso, 6 Cj. 1303
22031-001 – Rio de Janeiro – RJ
Brazil
Phone: (55 21) 2524-6081 – Fax: (55 21) 2533-6516
e-mail: josias@cremerj.com.br

Keywords: Marcus Gunn Syndrome; congenital palpebral ptosis; blepharoptosis.

ABSTRACT

The authors present a case of Marcus Gunn Syndrome, whose major feature is the synkinetic movement between mastication muscles and the upper eyelid, present in five per cent of the cases of congenital blepharoptosis. In the case presented, the synkinesia was observed between the left lateral pterygoid and the upper right eyelid. The etiology of the Marcus Gunn phenomenon is not known and treatment is mainly aimed at the palpebral ptosis, when it is severe, by resecting or transposing the levator muscle and correcting other extra-ocular lesions, such as strabismus, amblyopia, anisometropia and other conditions detected by specialized examination. The diagnosis is generally made early by the child’s parents or guardians who observe the synkinetic movement while nursing or feeding the infant. The assisting physician, or specialist, guides the treatment, mainly in relation to the indication or occasion for correcting major lesions. It is noteworthy to point out that the correction of the palpebral ptosis should, whenever possible, be accompanied by surgery of the palpebral levator in order to avoid the even more exaggerated permanence of the palpebral synkinesia.

INTRODUCTION

We present a case of Marcus Gunn Syndrome with the objective of re-establishing the knowledge of this condition that sometimes surprises the specialist, because it is a rare phenomenon in daily clinical practice. It is a
synkinesia between the movement of the masticating muscles, mainly the lateral pterygoids and opposite side palpebral levator, where the chewing movement is voluntary and the elevation of the eyelid involun-
tary and simultaneous, sometimes bringing about psychosocial discomfort to those with the condition. It occurs in five percent of cases of congenital palpe-
bral ptosis, according to most authors, along with other accompanying eye lesions 

**REVISION AND DIAGNOSIS**

The Marcus Gunn (Robert Marcus Gunn) syndrome or phenomenon was described by the author of the same name in 1883, in a case report published in the Transactions of Ophthalmologic Society (UK), according to citation of Timothy W. Doucet in the American Journal of Ophthalmology. It is a syndrome comprised by synkinesia already described, and by other eye lesions such as strabismus, amblyopia, anisometropia and other possible co-existing extra or intra-ocular lesions. Diagnosis may be made early from the observations of the parents of the child born with palpebral ptosis – because the Marcus Gunn phenomenon may present while baby is being nursed or fed – and drawn to the attention of the physician, pediatrician or ophthalmologist, who will not always be atten-
tive to or know about the syndrome. The ophthalmologic examination will be very important to ade-
quately assess, in addition to the palpebral ptosis (uni or bilateral), other ocular conditions that may be associated, as is frequently the case in the Marcus Gunn Syndrome, whose treatment may be initially more important than the palpebral ptosis itself. The actual nature of the neurological circuit that produces the synkinesia, in which motor branches of the trigemino-

**CASE REPORT**

Patient S.T.M.S., white, female, 38 years old, born and living in the state of Rio de Janeiro (Macaé), without any personal or family background condition related with the case, wanted to have esthetic rhinopasty. She presented a mild right palpebral ptosis, only visible as a small alteration of the palpebral rim whose vertical axis was 2 mm less than the left one. The eye exam by the ophthalmologist did not reveal any abnormality, in terms of refraction, amblyopia or motor lesion. The patient herself drew the author’s attention to the involuntary winking of the right upper eyelid while simulating lateralized chewing movements. During the lateral movement of the mandible to the left, there was a clear elevation of the right eye-

**DISCUSSION**

Although not very rare, the case presented deserves some comments, in that all congenital palpebral ptoses need to be assessed in terms of an existing Marcus Gunn phenomenon, which may significantly change...
the result of the palpebral ptosis correction, regardless of the severity or technique for correcting it. The synkinesia, itself does not have an adequate neurological correction, but can be improved through surgery by a partial resection of the eyelid levator or its transposition along with the correction of the ptosis (1, 7, 8, 9). In severe ptoses, the most suitable surgical method seems to be the partial resection of the levator and suspension of the eyelid by the different techniques usually adopted, mainly suspension by aponeurotic or allogenic material grafting. Results may always be favorable, and the issue should be discussed in detail with the client. Inadequate treatment of the synkinesia of the palpebral levator in the post-operative period has been the most common demand cited by various authors. The best long-term results are around 64% of patients satisfied with surgery, when ptosis and synkinesia are corrected. Protric on synkinetic lesions with a mild degree of esthetic or functional alteration should not be corrected, especially during childhood, because in most cases patients adapt very well to these conditions that may even improve with age. It is necessary to treat other coexisting eye lesions, sometimes as or more important than the ptosis or synkinesia.

**FINAL COMMENTS**

The case herein reported is that of a simple lesion, whose signs fortunately are restricted to a mild palpe-

---

**Fig. 1** - Patient opening eyes normally, with a slight difference in the right palpebral rim (smaller vertical axis), revealing a mild palpebral ptosis.

**Fig. 2** - Patient with horizontal ocular axis, when moving mandible to the left; due to the action of the lateral pterygoid, the right upper eyelid rises synkinetically.

**Fig. 3** - While moving the mandible with the ocular axis downwards, the patient exposes the sclera more clearly, making the synkinesia more noticeable.

**Fig. 4** - With her eyes closed without effort and making mandible movements, the patient does not present synkinesia which is probably compensated for by the tonus of the orbicular palpebral muscle.
bral ptosis and clear pterygoid-palpebral synkinesia, duly controlled by the patient herself, without any major psychological or social discomfort. The synkinesia, in this case, was not accompanied by severe motor lesions (strabismus, severe ptosis or deficient movement of the eye), making any surgical intervention unnecessary, from our point of view.

REFERENCES


