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Case Report *Medical research*

Marcus Gunn Jaw Winking Phenomenon

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ABSTRACT

Marcus Gunn Jaw Winking Phenomenon (MGJWP) is a synkinetic phenomenon which can be congenital or acquired in certain cases, presenting unilaterally or bilaterally and could also be present without ptosis. Patient usually adapts to it and surgical procedures are available for correction, if debilitating. Here we report a case of 20 year old male who was asymptomatic and was detected to have Marcus Gunn jaw winking phenomenon incidentally.

Keywords: Marcus Gunn jaw winking phenomenon, Marcus Gunn, Jaw winking.

INTRODUCTION

Jaw Winking Phenomena is a synkinetic phenomenon which was first described by Robert Marcus Gunn called as Marcus Gunn jaw winking phenomenon (MGJWP). Synkinesis is simultaneous movements of muscles supplied bydifferent nerves in a coordinated manner. MGJWP involves ptosis, elevation and retraction of eyelids when the jaw moves during sucking and smiling.

CASE REPORT

A 20 year old male came to the Medicine outpatient department with complaints of burning micturition. On general examination, the patient was found to have ptosis of right eye (Fig 1). There was also elevation of the right upper eyelid on mouth opening (Fig 2). Systemic examination was unremarkable. The patient had never sought any medical help for this. The patient was treated for

UTI and the abnormal eyelid movements were evaluated.

The visual acuity and extraocular movements were normal. Blink reflex, cornea, iris and pupils were normal. Other neurological examination was also normal. Investigations including MR Brain were also within normal limits.

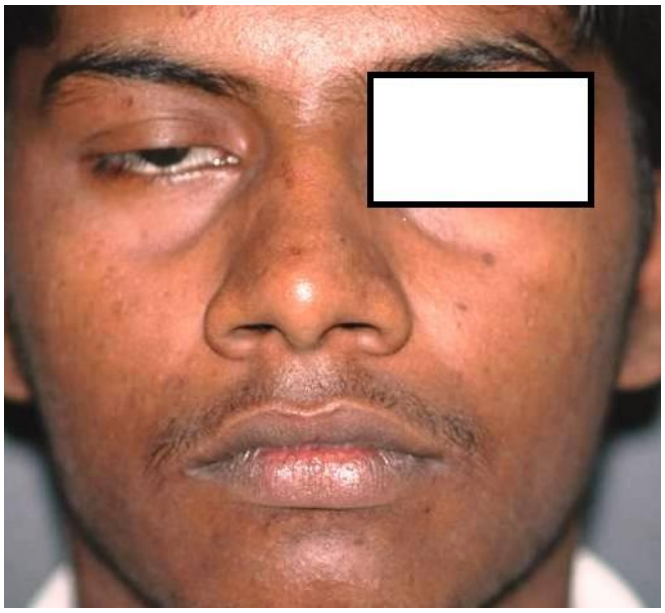

Fig 1: Partial ptosis of the right eye

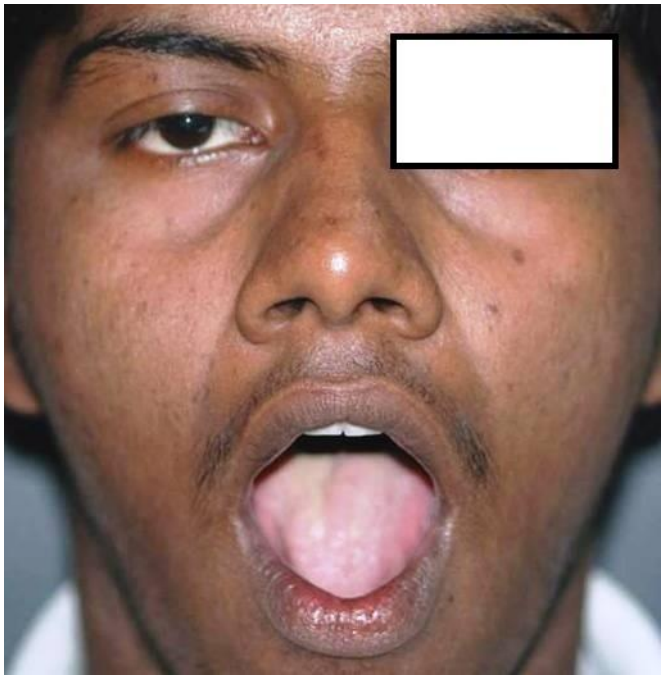

Fig 2: Elevation of the right eyelid with opening of the mouth

DISCUSSION

MGJWP was first described by an ophthalmologist, Robert Marcus Gunn in 1883.It was thought to be due to misdirection of axons of trigeminal nerve which were intended to travel and innervate the pterygoid, but aberrantly innervating

the levatorpalpabraesuperioris muscle which is usually supplied by the oculomotor nerve. MGJWP is due to neurogenic atrophy along with aberrant innervations. It is usually a bilateral process with one lid affected more than the other [1, 2]. The etiology probably starts in utero with pathology in the brain stem than the peripheral nerve fibres. MGJWP does not have any relation to preterm gestational age as full term babies with MGJWP also have been described. MGJWP was thought to be a congenital syndrome associated with ptosis, adduction and retraction defects but cases with no ptosis and retraction defects and isolated adduction defects have also been reported. An acquired case of MGJWP in 65 old male due to diabetes has also been described with the winking reducing after achieving good glycemic control.[3] When present congenitally, it is mostly sporadic in nature. Severity of the wink is assessed by the covering of the upper eyelid over the cornea which is around 1mm normally. It is mild when the coverage is less than 2mm, moderate when it is between 2 and 5 mm and severe when more than 6mm [4]. MGJWP is associated with strabismus (36%), Double elevator palsy (25%), Superior rectus plasy (36%), Ambylopia (34-59%), cleft lip / palate, CHARGE syndrome, Renal Calculi and Duane Syndrome [5]. Other ocular synkineic syndromes include Marin Amat syndrome and Inverse Marcus Gunn syndrome in which there is falling of eye lids on mouth opening as there is inhibition of levator muscle [1].

Various surgical options are available for MGJWP which includes bilateral frontalis suspension with unilateral levator excision and frontalis sling repair. Usually surgery is needed for severe cases alone as the mild cases improves with time as the person learns to recognize and adapts movements to minimize and mask the wink [6].

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