Marcus-Gunn's Syndrome

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The first patient is a case of Marcus Gunn's syndrome. This well-known syndrome has been discussed by Halbertsma, who demonstrated a case without evident ptosis, and by Waardenburg, who advocated treatment of the ptosis by Machek's operation. The main features are: unilateral ptosis, with elevation of the eyelid upon action of the masticatory muscles.

The affection is classified among the so-called paradoxical or synkinetic movements of the eyelids. In these affections movement of the upper eyelid is associated with movements of the other extra-ocular muscles: e.g., the rectus muscles or masticatory muscles.

At the last meeting in Leyden, Colenbrander demonstrated a case which occurred in consequence of an operation on the cerebellum, in which synkinesis existed between the left eyelid and the muscles of the tongue.

The affection may be acquired or congenital, as in our patient. Congenital cases tend to be familial. The father and grandmother

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of our patient were said to have the same affection; when they were eating, the eyelid moved up and down. The two children of the patient are normal.

We show this patient because besides Marcus Gunn's phenomenon, he has a very rare paradoxical eyelid retraction: the ptosis is also relieved when the other eye is shut. Another reason is the treatment of this case.

Clinical findings are:

R.E.V.: 1; L.E.V.: $\frac{1}{8}$, after correction. There was a very pronounced left-sided ptosis, more than usual in this kind of case. The left eye is more frequently affected than the right; also males are more often affected than females. When the mouth is opened, the left eyelid is elevated; this elevation increases when the jaw is moved to the right, it decreases when the jaw is moved to the left (fig. 1). If the mouth is kept shut, movements of the jaw have the same effect, but to a lesser extent.

The other paradoxical reaction is shown in fig. 2. The left eye is opened when the right eye is shut. If the mouth is opened as well, the left eye is opened more widely. On shutting the mouth, the left upper eyelid is lowered by a few mm. The left eye is opened most widely when the mouth is opened and the right eye is shut. It makes no difference whether the right eye is shut or the mouth is opened first. Finally he shows a remarkable reaction, of which I did not find any mention in the literature. The left eyelid can be opened voluntarily, with great effort, when looking in a mirror from a short distance.

The different theories for the explanation of these phenomena will not be discussed in this paper, but I will give some considerations of the treatment applied in this case.

The jaw-winking phenomenon in our case was, as often happens, associated with pareses of the external ocular muscles. The left eye showed a hypophoria of about 20° , there was paresis of the left superior rectus and possibly of the left inferior oblique muscle. Bell's symptom was absent, which made treatment difficult: the patient wanted to be relieved of his ptosis. To begin with, I corrected the large vertical deviation; the inferior rectus was recessed by 4 mm. and 8 mm. of the superior rectus were resected. In the primary position of the eyes there was no longer vertical deviation. As to the ptosis, I decided, considering the absence of Bell's phenomenon, to use a method the effect of which

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Fig. 1.

Fig. 2.

Fig. 1. Movements of the left upper eyelid, when the patient opens his mouth and moves his lower jaw to the left and right.

Fig. 2. The ptosis is also relieved, when the right eye is shut. On opening of the mouth the left upper eyelid moves still higher upwards. Voluntary opening of the left eye is only possible, when the patient is looking in a mirror.

Fig. 3. Before and after operation.

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could be easily abolished. The Guyton-Friedenwald suture seemed to be very useful for this purpose: in the first place it is a very effective operation, and the effect can probably be abolished for the greater part by removal or cutting of the suture. After the operation the patient had some slight complaints of drying of the cornea, which were easily cured by a dressing applied during the night for the first few weeks. The effect of the operation is satisfactory (see fig. 3). Paradoxical movements are still present, of course, but do not cause annoyance to the patient. By using the frontalis muscle the patient is able to lift his left eyelid still higher.

Discussion.

Halbertsma asked whether the speaker agreed with the opinion that in this case the pterygoid muscle plays a part in the explanation of the fact that shifting of the jaw to the other side causes opening of the eye.

Winkelman replied:

It seems plausible that innervation or action of the pterygoid muscle might be the cause of the jaw-winking phenomenon. However, it cannot be concluded that Grant's assumption of a proprioceptive reflex arch or one of the other theories advanced in explanation is true.

Corneal Transplantation in Cornea Guttata.

By J. E. WINKELMAN (Amsterdam).

In her thesis Mrs. Kok van Alphen pointed out that histological investigation of trephined rounds in corneal transplantation has not been practised very much, and that it nevertheless affords an excellent means to study the histology of pathological conditions, specimens of which are otherwise not so easily available. She gave a description of 100 corneal rounds. There is, however, no case of cornea guttata in this material. This affection is not considered to have a good prognosis in corneal transplantation.

Cdstroviejo in 1945 contended that in some corneal dystrophies the graft is always invaded by the dystrophy of the recipient cornea and Fuchs' endothelial dystrophy is an example of these cases. Nevertheless at the Congress in London he demonstrated