Missed Diagnosis of a Case of Trochlear Paralysis

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From time to time we are brought up short by a case in which, after many, often serious therapeutic measures, a new diagnosis leads to a much simpler cure. Such a case, in my opinion, is that of the patient I am going to describe.

He was born in July 1962. At the age of 6 months it was noticed that he held his head crooked. His face appeared to be asymmetrical. At the age of 18 months adenotonsillectomy was performed.

An ophthalmologist was consulted in October 1964, because the child sometimes appeared to squint. His findings were: outward deviation of the right eye; slight upshoot of the right eye when looking to the left; eyes parallel when looking straight forward. No treatment was suggested. From his report it appears that the diagnosis made was that the sternocleidomastoid was too small and operation was advised. The patient was admitted to hospital in November 1964.

The surgeon found torticollis to the left, and scoliosis to the right on X-ray examination and asymmetry of the face.

The neurosurgeon found marked asymmetry of the face. He had the impression that the buccal branch of the left facial nerve was paralysed. The eyes were closed normally at night. X-ray examination: vertebrae – trace of scoliosis; skull – no anomalies. His conclusion was 'congenital anomaly'.

An ophthalmologist in consultation in the hospital, found no ocular anomalies.

The ear, nose and throat specialist found no anomalies.

The orthopaedic surgeon could find no muscular cause for the torticollis and suggested the application of a Glisson's sling with 1 kg traction. This traction was kept up for 9 months at home and was then stopped by the parents without further medical control because of its psychological effect on the child.

The lung specialist in February 1967, found a tendency to sit bent forward and a low, mobile diaphragm, and spastic bronchitis probably of atopic origin.

In these days of increasingly precise and complicated diagnostic and therapeutic possibilities, the simple procedures must not

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be forgotten. The diagnosis could be made in this case by means of a few very simple tests.

If, in all children between the ages of 1½ and 2 years, the reaction to covering the 2 eyes separately with the hand is tested, a difference in reaction can put us on the track of amblyopia. A fixation movement after covering the eye suggests a squint. In doubtful cases each eye can be occluded separately for a few days.

In this case the torticollis disappeared when the right eye was covered. When the head was tilted, the position of the eyes was normal and there was good stereoscopic vision. If the head was held straight, the right eye deviated upwards and diplopia occurred. In order to avoid this, the child held his head crooked. The torticollis was not purely to the left but to the left and forwards, exactly in the direction of action of the right superior oblique muscle. This muscle was paralysed.

In ocular torticollis the head is held in a position as if the paralysed muscle were working on the head and pulling it crooked in its direction of action. To what extent the position of the head influenced the asymmetry of the face, and the bent posture led to breathing difficulties, cannot be determined, but it seems to me quite possible that there is a connection.

When there are lesions of the eye muscles of long standing, compensatory changes in tone in the other eye muscles often occur, so that sometimes, in addition to operation on the antagonist of the affected muscle, further operation is necessary to overcome these changes.

In this case a medioposition of the inferior oblique of the right eye was chosen and a reposition of the inferior rectus of the left eye. After the operation the position of the head was practically normal and there was little to see of asymmetry of the face.