

CONVERGENCE INSUFFICIENCY AND DUANE'S RETRACTION SYNDROME

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Abstract

A review of 37 cases of Duane's retraction syndrome revealed asthenopic symptoms in association with defective convergence in 22 cases. In some, symptoms were relieved by conventional convergence exercises. Evidence suggests that the presence of symptoms and the possibility of relieving them is often overlooked in such cases.

Key Words

Duane's retraction syndrome, convergence insufficiency.

The Stilling Turk Duane syndrome was first reported in 1887. Since being described by Duane in 1905 it has become better known as Duane's retraction syndrome.

Clinically the syndrome varies but characteristically the affected eye demonstrates an absence of abduction with widening of the palpebral fissure and perhaps some protrusion of the globe on attempted abduction, and narrowing of the palpebral fissure with retraction of the globe on adduction, which may also be limited.

Frequently there may be either an upshoot or downshoot of the adducted eye. A manifest deviation may be present in the primary position, binocular single vision may be achieved by the use of a compensatory head posture. Convergence is often defective due to limited adduction. Not all the characteristics described by Duane are displayed by every patient.

The incidence and significance of the reduced convergence in these patients does not appear to have been studied, therefore the case records of 37 patients with Duane's retraction syndrome who have been seen at the Sydney Eye Hospital were examined to consider this and other associated features.

CONVERGENCE

Little has been reported in the literature concerning this feature. The usual concern of the examiner has been the limited eye movements

with respect to the squint and cosmetic appearance. It was therefore very interesting that many patients first presented between the ages of 14 to 25 years and did so because they were experiencing symptoms of sore eyes and headaches related to close work. In this study almost 60% had a convergence near point more remote than 5 cms. It is therefore likely that these people had an associated convergence insufficiency, the significance of which may have been masked by the more obvious and interesting features of Duane's retraction syndrome.

All these patients had binocular single vision, either with or without a compensatory head posture, and may have had the potential to improve their convergence if treated with conventional exercises. Full convergence may have been an unrealistic expectation but some improvement may have been sufficient to relieve symptoms.

Seven patients were given conventional convergence exercises, of these two had a definite improvement, two failed to improve, and the remaining were lost to follow up.

ASSOCIATED FINDINGS

The syndrome affected females more than males, (58% : 42%). The left eye was more commonly affected than the right and there was one bilateral case.

Half of the cases had a compensatory head posture to achieve binocular single vision and of

these there was an almost equal distribution of eso and exo deviations in the primary position for near fixation. However the proportion of eso deviations increased in those without a compensatory head posture.

CONCLUSION

Of particular interest in this group was the large number which presented with poor convergence

and associated asthenopic symptoms. This feature of the syndrome deserves special attention by the orthoptist and every effort should be made to relieve the symptoms. Conventional convergence treatment should not be overlooked as even a small improvement may relieve symptoms.