The Surgical Treatment of Duane's Retraction Syndrome

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The characteristic features of Duane's syndrome are restriction of abduction and retraction of the eye with narrowing of the pal-pebral fissure on adduction. The restriction of abduction can be completely or partially overcome by temporal transplantation of the superior and inferior recti combined with recession of the internal rectus.

The vertical recti are completely freed from the sclera and transplanted temporally. The nasal tip of the tendon is attached to the temporal end of the original insertion. The temporal tip of the superior rectus is attached at the upper limit, and the temporal tip of the inferior rectus at the lower limit of the insertion of the external rectus. The internal rectus is recessed 5 mm and the check ligaments are split. The temporal transplantations and the recession are performed at one sitting. As a result of the temporal transplantation the vertical recti acquire an abducting effect. This abduction is augmented by the recession of the internal rectus.

27 cases were reviewed and post-operative control was made of the following points: (1) the abduction; (2) the angle of squint, and (3) the anterior segment of the eye.

The abduction was measured by means of the amblyoscope both before and after the operation. The average increase in abduction was 22° with a minimum of 10° and a maximum of 35° .

The angle of squint was measured with Maddox's tangent scale. In 25 cases the eyes were straight, although 12 patients had more or less pronounced torticollis. In two cases the position was divergent.

The anterior chamber was examined with the slit-lamp to see if cutting through the 3 recti with their ciliary blood vessels had not caused trophic disturbances. 23 of the 27 patients were examined and no abnormality was discovered.