CASE NOTES

INSERTION OF SUPERIOR OBLIQUE WITH SUPERIOR RECTUS MUSCLE*

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DUKE-ELDER (1949) quotes Heuck (1879) for evidence of insertion of the superior oblique muscle to the nasal side of the superior rectus. A case of this unusual abnormality is reported below.

Case Report

B. P., female, aged 14 years, admitted to the Worcester Eye Hospital on February 28, 1952, for operation to overcome congenital inaction of the right external rectus. There was no movement of the right eye beyond the mid-line when looking right but 5 Δ right hyperphoria was produced by the attempt. In the primary position there was no hyperphoria. Spectacles were worn for slight convergent strabismus.

Visual Acuity—Right: +4.00 D sph. +0.50 D cyl. axis 90°
Left: +4.50 D sph. +0.50 D cyl. axis 90°

The angle of squint, measured on the synoptophore, was only +6° with correction and +8° without.

It was planned to do what we have become accustomed to call a Temple Smith operation, but omitting recession of the internal rectus.

At operation, when the insertion of the superior rectus was exposed and freed from Tenon's capsule, a strong round cord of tissue about 3 mm. in diameter was found on the nasal side of the rectus muscle approaching it at an acute angle and disappearing beneath the nasal edge of the muscle to be inserted with it. The cord was white and glistening, being covered with a capsule. It was neither adherent to, nor fused with the superior rectus, except at the point of insertion. Traction on the cord with a squint hook lifted the conjunctiva along a line passing directly to the trochlea, so that the cord was demonstrably an aberrant superior oblique muscle. It looked just as if some one had tucked the round belly of the muscle under the nasal edge of the superior rectus and fastened it there, except that there was no scarring or fibrosis, and no previous operation had been performed.

The pre-operative finding of right hyper-

FIGURE.—Diagram of right eye to show abnormal insertion of superior oblique under nasal edge of superior rectus.

* Received for publication April 7, 1952.

phoria on dextroversion suggested that this aberrant oblique was causing an excessive elevator action. The muscle was therefore separated and re-inserted in its proper place below and external to the superior rectus, and posterior to the equator of the globe. The lateral third of the superior rectus and an equal breadth of the inferior rectus were detached and stitched to the insertion of the external rectus in the usual way.

It is rather early to judge the result, but at this stage, ten days after operation, there is a right hypophoria of 4^{Δ} which increases to 13^{Δ} on looking right. This compares with 5^{Δ} hyperphoria on looking right before operation. Apparently the oblique in its new position is too effective. The eye is now capable of about 15° abduction compared with none before.

Comment

It is quite possible that this abnormality is not so uncommon as one might think. The white glistening cord can easily be mistaken for a piece of Tenon's capsule and be severed by the surgeon without his realizing its real identity. The writer recalls seeing somewhat similar cords before and entertaining a suspicion that they did not accord with normal anatomical relationships.

If the abnormality proves to be a common accompaniment of congenital paralysis of the external rectus muscle this case would suggest that the re-insertion should be less temporal than the normal position to avoid giving it a mechanical advantage in excess of requirement.

The case was referred to me by Mr. C. Gordon Sinclair, to whom I express my thanks.

REFERENCES

- DUKE-ELDER, S. (1949). "Text-book of Ophthalmology", vol. 4, p. 4068. Kimpton, London.
HEUCK, G. (1879). *Klin. Mbl. Augenheilk.*, 17, 253.