BUPHTHALMOS IN THE RABBIT*

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CONGENITAL glaucoma in the rabbit has been described by many authors, notably Schloesser (1886), Pichler (1910), Vogt (1919), and Rochon-Duvigneaud (1921). We have recently seen two cases of this condition in rabbits supplied to us for other experimental purposes.

Both eyes were affected in each animal; the eyes were large and had oedematous, hazy corneae and deep anterior chambers. The

FIGURE.—Buphthalmos in albino rabbit.

episcleral vessels were congested. The histology of the eyes corresponded closely to Rochon-Duvigneaud's excellent description which should be consulted for further details.

We were particularly interested to observe whether or not aqueous veins could be found in these eyes, as recent work (Weekers and Prijot, 1950; Greaves and Perkins, 1951) has shown that they are a constant finding in the normal rabbit.

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Examination with the Haag-Streit slit-lamp showed that all the episcleral vessels were congested, but no vessel resembling aqueous veins could be found. Furthermore, pressure on the globe failed to bring out any change in the vessels corresponding to the increase in outflow of aqueous seen in the normal rabbit.

Evan's blue injected into the anterior chamber with the eye connected to a compensating manometer failed to appear in the episcleral plexus, but when the pressure was artificially raised from its original 50 cm. saline to 80 cm. saline some blue colour was noted in many of the episcleral blood vessels near the limbus.

This suggests that although the drainage does occur from the eye to the episcleral vessels, very little aqueous humour drains by this route in buphthalmic eyes.

SUMMARY

- (1) Two cases are described of buphthalmos in rabbits.
- (2) No aqueous veins were observed in these eyes.
- (3) Evan's blue injected into the anterior chamber did not appear in the episcleral plexus unless the pressure was raised artificially to 80 cm. saline.

The Figure is a photograph of one of these rabbits taken by the Medical Illustration Department of the Institute of Ophthalmology.

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