

trusting to shrinking of the deeper parts in the tarsus from loss of its blood-supply through the divided epitarsal vessels. Of course, in the larger angiomas which extend into the orbit, some further steps are necessary, a discussion of which is beyond the limits of this paper. This latter class of tumors is considered in Knapp's paper, before referred to.

REMARKS.

DR. AGNEW remarked that, if he remembered rightly, the doctor, in his narrative, did not describe a case occurring higher than the upper eyelid. He had seen one four weeks previous that occupied the upper half of the eyebrow. He agreed with Dr. Bull that the clamp was necessary in operating for the removal of such growths. In this case, however, he did not use it, and thought that some modification of the forceps would have to be made in order to clamp the tumor in that region. If he were to operate again in that region, he would modify the forceps so as to include the tumor.

DR. KNAPP thought we should remove these tumors as soon as they were brought to our notice. A year ago he had seen an excessively large one, by the kindness of Dr. Frank, of Baltimore. It had been allowed to grow for fifteen months. The eye was pushed toward the nose, and large vascular tumors occupied the corresponding side of the face, being then beyond all treatment. Dr. K. was sure that in its initial stage the tumor might have been easily removed.

PECULIAR ANATOMICAL DEVELOPMENT OF ONE OF
THE CENTRAL ARTERIES OF THE RETINA.

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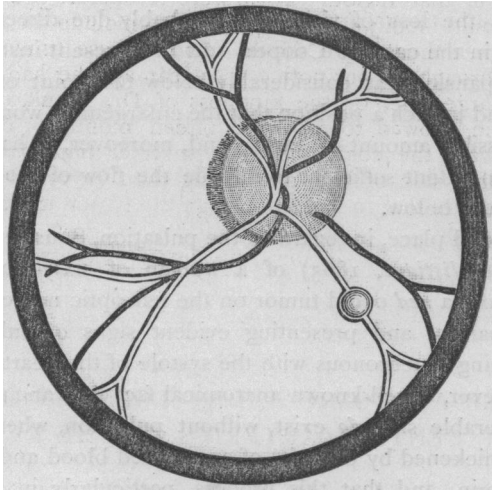
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THE following case is not one that can claim, perhaps, much importance in a clinical point of view, but is one that seems worthy of publication, on account of a peculiar anatomical development of one of the central arteries of the retina.

Mr. H. consulted me, some time since, on account of a slight attack of phlyctenular keratitis in the right eye, that yielded most readily to treatment. On his last visit he requested me to make a thorough examination of his eyes, as, being a deaf-mute, he was

most dependent on them, and was anxious to know if an early use of glasses would be of benefit to them.

Both eyes were emmetropic in refraction ; V. = $\frac{20}{20}$ —, A. good, and the field and color-perception normal. Under the ophthalmoscope the media and lenses were clear and transparent, and the retina and choroid normal in every respect. In the left eye, however, the lower branch of the central artery presented a most peculiar bulging of its entire circumference. This annular enlargement took place below the margin of the papilla, at a distance corresponding to about three-fourths of its diameter, and was situated at about two-thirds of the distance between the lower edge of the disk and the first bifurcation of the artery taking place below it, its central diameter being nearly three times as great as that of the vessel proper. Its color was lighter than that of the artery, and the "light streak" ter-



minated abruptly at its origin, beginning again immediately below it. There was no pulsation attainable by pressure and there was no stasis of the blood-column above it. The fundus was singularly free from blood-vessels in its near neighborhood, thus allowing a most exact examination to be made with ease. The patient was a young and healthy man of twenty-five years, and a careful examination of heart and lungs proved both to be normal. His hearing had been lost in early infancy, from an attack of measles.

The principal points of difference that this case presents to the majority of cases of aneurismal dilatation already reported, are, I

think, chiefly confined to the two following: *First*, that the vision and functional processes of the eye were not affected; and *Second*, that there was no pulsation, either of a spontaneous nature, or to be obtained by pressure.

The first of these is due probably to the fact that the dilatation of the artery took place after the vessel had emerged from the nerve, so that there was no compression of its fibres, as in the pathological preparation now in the possession of Professor Schmidler, of Friburg, in which the aneurisms compressed the optic nerves of both eyes, and in which vision was completely lost, with the exception of a faint perception of light in looking downward (*Dictionnaire des sciences médicales*, tome xxv., p. 20). A similar case is also reported by v. Graefe (*Angiectasie*, p. 32, Leipsig), in which the central artery was dilated to the size of a blade of grass, while yet within the nerve, and in which the blood-vessels of the retina were varicose. In this case the loss of vision was probably due directly to compression, as in the case of Cooper. In the present instance, however, the expansion was considerably below the point of exit from the nerve, and in such a position that the enlargement would produce the least possible amount of harm; and, moreover, it had not progressed to an extent sufficient to impede the flow of blood through it to the tissues below.

In the second place, in regard to the pulsation, Sous reports a case (*Annales d'oculistique*, 1865) of a woman of sixty-four years, in which he found a *red* ovoid tumor on the left optic nerve, extending below its margin, and presenting evident signs of pulsation, the dilatation being synchronous with the systole of the heart.

It is, however, a well-known anatomical fact that aneurisms, even of a considerable size, *do* exist, without pulsation, when the walls have been thickened by deposits of coagulated blood and successive layers of fibrin, and that this process, particularly in the smaller arteries, is often a means of spontaneous cure.

That this conservative process had, to some extent, taken place in Sous' case, seems probable from these facts, viz. : that pulsation did not exist; that the color of the enlargement (unlike that of our case) was lighter than that of the vessel proper, and that there was an entire absence of the illuminated spot, corresponding to the "light streak" of the cylindrical vessel, that we should expect to find on the convexity of the dilatation, if the latter were completely filled with blood, with walls possessing the same, or an increased degree of transparency.