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DISEASES OF THE ORBIT.

BY R. A. REEVE, B.A., M.D.,

Professor of Ophthalmology and Otology, University of Toronto;
Surgeon Mercer Eye and Ear Infirmary, Toronto
General Hospital.

(Read at Meeting of Canadian Medical Association.)

The position, relations, and nature of contents of the orbit, and the fact that the organ of vision is often implicated and may be lost, and that life itself may be jeopardized and is sometimes sacrificed as the result of its affections, render the latter of some importance in the category of disease. The object of this paper is simply to refer to some points of practical importance in this interesting class of cases. The interest attached to diseases of this cavity is enhanced by the acknowledged difficulty in many instances of making a correct diagnosis.

I need but cite the *pulsating tumors* in regard to which the old view of orbital aneurism being the cause of the exophthalmus and pulsation, has been disproved. Statistics show that orbital aneurism is very rare and that in nearly all such cases there is no disease in the orbit proper, but generally either an obstructed or dilated cavernous sinus or arterio-venous communication posterior to the orbit. The precise nature and site of other morbid conditions, as, for example, tumors, are sometimes an enigma which is only solved by direct exploration.

Cellulitis Following traumatism or other

causes of inflammation, erysipelas, pyemia, etc., the rapid onset of inflammatory œdema of the eyelids with marked chemosis, protrusion of the eye and inability to move it, and great increase of pain in attempts to do so, together with pyrexia, etc., indicate pretty clearly acute cellulitis of the orbit (or the more rare diffuse suppurative periostitis). The less rapid develop-



FIG. 1.—Periostitis and caries of outer half of upper margin of orbit

ment and milder character of these symptoms, especially when there is circumscribed tenderness on the orbital margin or walls with displacement of the globe, points rather to local periostitis, (fig. 1) which, except in syphilitic subjects, is apt to end in suppuration and caries unless aborted.

[In "abscess" of the frontal sinus the external swelling is generally greatest at the upper inner angle of the orbit, the brow is prominent and the orbital roof, which is depressed, yields to pressure from beneath; and the eye is displaced downward, outward and forward. If

fistula have formed, the discharge would be muco-purulent and the probe could be passed into the frontal sinus, and simple caries, etc., be thus excluded.]

In *cellulitis*, *periostitis*, etc., the early resort to deep incisions carefully made and entering the orbit near its margin, above, below, or at the side, is of great value in relieving the tension and pain; and by promptly giving vent to pus generally saves both sight and eye-ball, if not life itself.

The degree of protrusion of the globe compatible with retention of good vision is sometimes truly astonishing. In cases of intra-ocular growth, when the eye has ceased to rotate about its normal turning point and its movements are limited, perforation of the sclera and invasion of the inter-muscular space have likely supervened, and interference is imperative.

When in injury or inflammation of the eye or intra-ocular growth, oedema, chemosis, with more or less fixedness and perhaps prominence of the eye-ball, there is inflammation of tenon's capsule (tenonitis) and cellulitis is imminent. And if the eye is beyond recovery its prompt removal is indicated in order to prevent cellulitis and other mischief.

It has happened to me time and again to meet with cases of malignant growth which had already reached the condition termed fungus hæmatodes or encephaloid cancer, or had at least seriously invaded the orbital tissues, where the recognition of the primary intra-ocular mischief and timely enucleation would likely have proved radical, and prevented the need of the somewhat formidable *evisceratio orbitæ*.

I am satisfied from personal experience that, in cases of malignant orbital disease which seem desperate, material if not radical relief can be given by the operation of emptying the socket, removing periosteum if not bone, with or without the use of zinc chloride paste, etc. Sometimes glioma of the retina gives timely notice of its presence by the bright, creamy reflex from the depths of the eye. Sarcoma of the orbit may spring from the walls or connective tissues, and in adults it is also secondary to that of the choroid.

An early correct diagnosis of intra-ocular growth cannot always be made, even by the

aid of the ophthalmoscope; but, at any rate, if eyes which are blind, painful, and hard were looked upon with suspicion, and as a rule extracted, after a fair trial of proper means, there would be less fatality from sarcoma or other malignant disease. In an eye that was blind, hard and intensely painful which I enucleated eight years ago, a malignant tumor had just penetrated the sclera near the optic nerve. Fortunately all the diseased tissue was removed, and the patient was reported in good health and free from orbital disease several years afterwards.

I show a photo and specimen (in a fatal case) of sarcoma of the orbit in a young subject, in which the growth reached a circumference of twenty-one inches and weighed three pounds.

The question of prophylaxis in malignant orbital disease leads one to advert to another class of cases, in which the disease primarily attacks the lids or superficial parts. Here there is a double reason for an early operation, first, because the sooner done, the less of the normal tissue is lost,—an important point in the region of the eye; secondly, for the reason which applies universally in malignant disease. In subjects of fifty years and upwards, little or no harm would accrue, and much trouble or misery might be saved, were all warts, tumors (not chalazia), and ulcers of the lids treated as if actually malignant or at least in "pre-cancerous" stage. Happily, in some instances, even when the disease is of long standing and has destroyed the lids in whole or greater part and invaded the orbit to some extent, the removal of all the diseased parts gives permanent relief.

At the meeting of our Association at Ottawa, I detailed such a case with, for two years at least, a satisfactory result, no relapse occurring, and might cite others.

Orbital tumors often grow slowly and painlessly, and it is a moot point to what extent the malignant varieties should be interfered with; but as growths vary so much in nature, and if malignant should be extirpated early, it is advisable to employ every diagnostic aid. One which yields pretty certain results without any serious risk, is the resort to an exploratory incision carefully made beneath the brow or perhaps between the lids and the globe; the little finger

(aseptic) can then be utilized with or without the careful use of a probe or a mirror and speculum. Sometimes tumors, even malignant growths, may thus be found, when they can be removed without sacrificing the eye.

It is necessary also to become satisfied as to the state of the nasal passages by anterior and posterior rhinoscopy, and of the maxillary sinus,--- at least by exclusion, before giving the prognosis or resorting to operation. In the case of orbital disease with protrusion and lateral displacement of the eyeball, shown in this photo (see fig. 2),



FIG. 2.—Secondary invasion of orbit by sarcomatous growth.

I declined to interfere because I found the left nasal meatus plugged with a sarcomatous growth which, from the history, antedated the orbital trouble; rhinoscopy also showing that the growth was creeping into the posterior naris of the opposite side. The exploratory puncture which had been already made had given the patient great relief from the pain caused by excessive tension and pressure upon the tarso-orbital fascia. In another case which proved to be schirrus and which was not operated upon, the exploratory incision (left unstitched) also gave marked relief; and although such incisions may favor the more rapid sprouting of growths, the relief they afford is not to be under-estimated, and should be given.

It is worthy of mention that bony growths can be removed with least danger and most quickly by separating them from the seat of attachment rather than by chiselling, etc., at the mass itself, care being taken to first peel off the enveloping membranes,—the “sub-periosteal removal” of Maisonneuve and H. Knapp.

[Since the paper was read (1882) various cases have occurred in the writer's experience to

emphasize several points, *e.g.*, the importance of early correct diagnosis, great benefit of prompt relief of orbital tension or evacuation of pus, and value of exploratory incision, and of early operations. A word as to injuries: In contrast with the well-known risk of fatal result from penetrating wounds of the roof of the orbit, notable instances might be cited of tolerance of large foreign bodies in the socket and the successful removal of good-sized bony tumors. In cases of penetrating wounds of the orbit, careful search should be made for foreign bodies possibly lodged within.]

22 Shuter Street.

LIFE INSURANCE AND THE RELATIONS EXISTING BETWEEN IT AND MEDICAL MEN.

BY DR. JAS. THORBURN, TORONTO,

Professor of Pharmacology and Therapeutics, University of Toronto; and Medical Director North American Life Assurance Company.

(Read at meeting of Ontario Medical Association, 1888.)

Life insurance is now one of the principal institutions of the civilized world, whether we view it financially or as a provision to succor and maintain those who depend upon the heads of families for their present and future support as well as comfort and happiness, or to maintain one's self in after years, when unable, from various causes, to battle with life. The history of it is interesting and instructive.

In earlier years annuities were common, and these were granted by Jews and usurers, and extortion and vice of all kinds prevailed. Policies of all kinds were issued, not only for mercantile purposes, but also against wind and weather, against particular diseases, providing safe passes even through purgatory; etc. Intrigue and wars, with pestilence, carried off tens and hundreds of thousands, and there was no provision for those left behind. In its infancy life insurance was conducted in a hap-hazard style, and partook very much of a gambling nature. Often the healthy and strong died suddenly. It is only within the last century that anything like a scientific basis has been established. The observations of medical men and statisticians have deduced the probable duration of human life to an exact period of