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Vascular Tumour in the Orbit, of many years' standing, and latterly producing threatening symptoms, successfully treated by injecting with Tannic Acid. By Haynes Walton, F.R.C.S., Surgeon to St. Mary's and to the Central London Ophthalmic Hospitals.

I have ventured to give professional publicity to this case through the Royal Medical and Chirurgical Society, and I hope that it may prove worthy of such a channel of communication.

Orbital tumours form a very interesting class of surgical disease. Considered with reference to treatment, especially those of cystic formation, they demand much judgment, reflection, and a due consideration—I might say a comprehensive study—of all the connective circumstances. Besides our having to decide how a morbid growth, often of a doubtful nature, and of uncertain extent, is to be got rid of from an intricate position, the saving or the sacrifice of sight might sometimes be among the grave topics for thought, and even the contingency of a fatal termination may require to be viewed in a strong light.

A lady, æt. about 20, was sent to me in the summer of 1856, by Mr. Square, of Plymouth, for my opinion on a vascular tumour in her left orbit. The eyeball was prominent, and turned slightly upwards and outwards, restricted in motion, and incapable of being directed inwards. The lower eyelid bulged, and was slightly discoloured, especially towards the nose.

By turning down the tarsal margin, there was exposed a growth with a definite outline, having the appearance of a congeries of veins attached to the eyeball, and which was evidently only a part of a larger mass. Pressure emptied it, the act producing pain, and the re-distension was very slow. The chief subjective symptoms were these: Pain on the slightest exertion, and in extremes of temperature, and during the catamenia. In-

ability to lie down, because of unpleasant sensations in the orbit and head. Vision nearly extinct.

The affection was congenital. Very soon after birth slight swelling of the lower eyelid was noticed. At five years of age, on account of increased tumefaction, Sir Benjamin Brodie was consulted, and according to the statement of the patient's mother, he did not consider it of any consequence. At the age of thirteen it attracted attention generally, and besides being larger, there was a bluish tint of the integument. Reading or writing for some hours always caused temporary enlargement, and heightened the colour. Messrs. Lawrence, Tyrrel, Travers, Dalrymple, and others, were then seen; and while they differed in opinion respecting the nature of the malady, they agreed in their advice, which was to leave it alone, as there were no very urgent symptoms and but slight disfigurement. After this, Mr. Square, at the urgent request of the patient, and with no idea of curing the disease, but only of lessening deformity, applied a ligature to a large tortuous vein which ascended perpendicularly from the margin of the orbit to the edge of the cornea. This operation was successful as far as it went, but excited very severe inflammatory action. I learn besides, from this gentleman, that our patient had a small nævus under the tongue and one on the thigh, both of which he removed; also, that many years ago, he successfully treated her brother for a varicose state of a single vein of the conjunctiva,

There was now more decided increase from year to year; the sight got very defective, their being often double vision, and the commencement of the other symptoms that I have described as existing when I was applied to.

I made a very careful examination, and came to the conclusion that the tumour consisted in chief of dilated and tortuous veins. I did not forget to scrutinise its relations, as on them, I was aware, should depend in a great measure the admissibility of doing anything, and not less the measures to be employed. I believed it was confined to the orbit. I had suspicions of prolongation into the lachrymal duct, but the integrity of the excretory lachrymal apparatus was not consistent with such a theory.

The position of the eyeball, often a means of determining the nature and situation of a tumour, induced me to think that it did not pass back into the orbit, at least not far back, but was limited to the inner and anterior part. Ultimately I recommended treatment. Further advice was sought. Among those applied to was Mr. Bowman, who alone coincided with me in recommending an operation. The lady was then placed under my care. It may be well to mention here that she was most desirous that some proceeding of a radical nature should be attempted, and had her wish not been gratified in England, it was the determination of her friends to proceed to the Continent.

I resolved to resort to the method of injection, and thereby to endeavour to produce coagulation of the contents of the tumour. The perchloride of iron seemed to be the most appropriate agent, and I had almost determined to use it, but calling to mind some instances of sloughing that I had seen follow its employment in nævi and other vascular growths, I hesitated, because, although in the instances alluded to there was no bad result and the severe local action was of no consequence on the trunk and on the limbs, in the orbit, on account of the close relation to the brain and its meninges, one of which communicates with this cavity, the greatest caution must be exercised lest the cerebral mass be affected. Not wishing, however, to relinquish this remedy, as it appeared otherwise suitable, and I had faith in its potency, I suspected that if used under certain precautions and in minute quantities, for instance with the screw piston syringe, it might be safe. I then endeavoured to ascertain its effect on blood out of the body, especially the quantity needed to produce coagulation, and when I found that a few drops rapidly and entirely coagulated an ounce, I rejected it as a matter of prudence, as I considered its action much too powerful.

I then experimented with a solution of lactate of iron, but I found that it was not capable of producing coagulation, which shows that the coagulating property of the muriated tincture is not due to the iron, as is generally supposed, but to the acid. While in search of an agent that could be depended on, Mr. Taylor, of Vere Street, suggested tannic acid to me, and it

seemed to fulfil all that was needed. It did not possess caustic properties, and readily influenced blood, destroying the colour and reducing it to a sort of granular condition. These experiments were done in the presence of my friend, Mr. William Adams.

Having filled an Anel's syringe, prepared with the coarse pipe, with a saturated solution of tannic acid, I proceeded to operate, being assisted by Mr. Square, Mr. Adams, and Mr. R. Taylor, one of my colleagues at the Ophthalmic Hospital. I made a snip in the most prominent part of the tumour; blood escaped at once and very freely. As quickly as possible I threw in the injection, emptying the syringe. The cessation of hæmorrhage, and the appearance at the orifice, proved that coagulation had ensued, and the solidity of the tumour verified the extent of the action. This was on the 14th of October, 1856.

There was much general depression and prostration, with frequent retchings, for twenty-four hours; but this was due to the chloroform, not however from any careless administration, as Dr. Snow was in attendance. The local effects were œdema and closure of the eyelids, serous chemosis of the conjunctiva and more prominence of the eyeball, slight swelling and redness of the integuments at the side of the nose and the upper part of the cheek. These increased for a few days, and in the highest stage were accompanied with much headache and fever, pain in orbit, and the appearance of spectra, prismatic colours and coruscations. As much of the pain was confined to the tumour, which now, five days after the operation, was very much enlarged, soft, and very dark—indeed, slate-coloured, as was also the surrounding conjunctiva—I incised it, but no fluid escaped, although some relief was obtained. But on the following day, a sepia-coloured discharge commenced. The eye was motionless. There was no perception of light, and the pupil was fixed, as it had always been. The progress two months later is told in the partially restored power of the muscles, especially the lateral and lower recti, reduction of the ocular protrusion and of the size of the tumour. The coloured discharge continued.

Later an abscess formed, and pointed just under the margin of the lower lid, from which I evacuated healthy pus.

November 20th.—The movements of the eyelids were quite restored. All chemosis had disappeared. Less of the conjunctiva was discoloured, but that yet affected as dark as ever. There was still discharge from the old incision in the tumour, but it varied in quantity, some days there was scarcely any, and the colour was less dark. Several times, pain and local irritation preceded the escape of fibrinous clots, about the thickness of a crow-quill, and varying in length from a quarter to half an inch; and twice a small cretaceous mass, about the size of a mustard-seed, was discharged.

I watched my patient until the middle of January. There was no longer any secretion from the seat of disease, and all trace of the tumour was lost. The oozing from the abscess that I opened had also ceased, and but slight coloration of the conjunctiva remained. The eyeball had fallen back nearly to the natural plane, but its movements were not perfect, it could be directed downwards and outwards, naturally, but not turned fully inwards; nor could it be raised to more than half the proper extent. She could lie in any position, and all unpleasant sensations were lost. Vision did not return. I was not surprised at loss of power in some of the orbital muscles, and of paralysis of the retina. Both were partially manifested before treatment, being directly induced by the morbid growth, and were easily increased by the inflammation and tumefaction of the orbital tissues. Similar effects may ensue when the cellular tissue of the orbit is highly inflamed from any cause, as I know by four kindred examples, one of which I will briefly give, as the fact is worth being impressed on the memory.

A gentleman was knocked down by a cab, the scalp was bruised, and the integuments over the external angular process of the frontal bone slightly lacerated. Acute inflammation in the orbit ensued. I was called to meet Mr. Coulson in consultation. The eyeball was much protruded, but never showed any inflammatory participation, yet vision became extinct, and the muscles were affected precisely as in the case in question. I may add, that in all the instances alluded to, the superior rectus has been the muscle the most affected, and the inner the next in degree.

I resolved not to publish my operation till time had tested its

efficacy. A year has elapsed since its execution. There is not the least trace of the disease, nor is there evidence, except under close inspection, of the exercise of practical surgery. The tears are conveyed away naturally. The eyeball moves more freely than before the operation. My patient and her friends are highly pleased with the result. I can, therefore, with proper authority, speak of the result as a cure, and recommend a similar procedure under like conditions.