Successful operation for a case of pulsating tumour of the temporal region of eighteen years standing / by C. Yelverton Pearson.

SUCCESSFUL OPERATION

FOR A CASE OF PULSATING

TUMOUR OF THE TEMPORAL REGION

OF

EIGHTEEN YEARS STANDING.

BY

C. YELVERTON PEARSON, M.D., F.R.C.S.E.;

SURGEON TO THE NORTH CHARITABLE INFIRMARY AND CITY OF CORK HOSPITAL, ETC.

Reprinted from the Dublin Journal of Medical Science—December, 1896.

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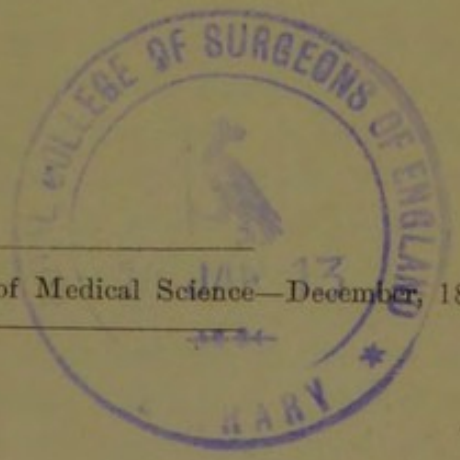

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SUCCESSFUL OPERATION

FOR A CASE OF

PULSATING TUMOUR OF THE TEMPORAL REGION

OF EIGHTEEN YEARS STANDING.

CASE.—W. A. M., male, aged forty-five, grocer, married, residing in Cork, admitted to North Charitable Infirmary, October 15th, 1894.

Family history.—Father died of liver disease, mother of paralysis; both at an advanced age. Patient has nine children—seven boys and two girls—all healthy. The eldest, a boy of eighteen years; the youngest, a boy of eighteen months.

Previous illness.—Had rheumatic fever when fourteen or fifteen years of age; also had scarlatina and measles. Otherwise healthy up to onset of present affection.

History of present affection.—About eighteen or nineteen years ago got a fall from a horse, and struck his head, but does not remember noticing any special injury at the time. A few months afterwards felt pain in left frontal and temporal region, which was at first of a dull character, but which gradually became more intense, and has continued ever since. Also complained of dizziness and a sensation of fulness in the head on stooping. Also noticed, at a somewhat later period, a swelling of the left temporal region, of a throbbing character, which has increased very gradually. In the course of about two years from the onset the pain, fulness, and dizziness became so great, on stooping forwards, that he was obliged to give up his business. He consulted several doctors, both in Ireland and England, and was treated chiefly by external applications, and advised to take plenty of fresh air. Only one medical man recommended an operation.

About three years ago he presented himself at the out-patient

[a] Read before the Surgical Section of the Royal Academy of Medicine in Ireland, Friday, January 10, 1896.

department of the North Infirmary, when he first came under my observation. I investigated his case very carefully at the time, and came to the conclusion that the swelling was of an aneurysmal character, most likely of traumatic origin, and, probably, associated with some intra-cranial mischief of a vascular nature. A consultation was held at the time with some of my colleagues, and it was not considered advisable to employ operative measures. He was, accordingly, treated with iodide of potassium, bromides, and, subsequently, digitalis, with a slight degree of temporary relief of his most distressing symptoms, but no permanent benefit, and disappeared after a time.

He again presented himself in October, 1894, and described his condition as being so unbearable that he implored to be admitted for operative treatment.

His condition on admission was as follows:—Average height; fairly stout; dark complexion; head proportionately large; appearance healthy; fairly intelligent, and mentally sound; but in depressed spirits on account of his malady. Thoracic and abdominal viscera healthy, and all bodily functions satisfactorily performed; but did not sleep well, owing to pain and throbbing sensation in the head.

Symptoms.—Constant headache and dizziness; cannot stoop forward without feeling giddy, and is unable to look upwards or throw the head backwards without feeling great pain. The pain is chiefly located in the left frontal and anterior temporal region. There was total incapacity for physical or mental occupation.

Physical signs.—There is a uniform swelling of the left temporal region, with perfectly smooth surface, convex, bounded by the temporal ridge and zygoma. The superficial temporal artery, in a much dilated and tortuous condition, can be easily recognised on the surface, as seen in the accompanying photograph. The tumour is soft on palpation, but has distinct pulsation of an expansile character. This pulsation cannot be arrested or even perceptibly affected by digital compression of the temporal artery or simultaneous compression of the temporal against the zygoma and its branches of distribution above the seat of the swelling. On careful palpation an irregular fissure, about a quarter of an inch in its longest diameter, can be felt near the margin of the swelling, about one inch and a half above and behind the external angular process of the frontal bone, and, probably, situated in the coronal suture. Pulsation cannot be arrested by making firm pressure over this fissure,

Dr PEARSON ON PULSATING TUMOUR.

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but is somewhat diminished by making pressure on the tumour itself. The pupils are equal, and respond normally to light. Ophthalmoscopic examination showed the existence of a choked disc and some optic neuritis on the left side, and increased vascularity of the right fundus.

Differential diagnosis.—The possible pulsating tumours of this region are—Hernia of the brain or its membranes; fungating tumour of the dura mater; pulsating tumour of the bones; malignant growths; and aneurysms. Malignant growths were excluded by the duration of the symptoms and the very gradual increase in size; hernia cerebri and meningocele by the absence of symptoms on pressure, and the very small extent of the fissure in the cranial wall; fungus of the dura mater by the slow progress, the well-defined boundaries of the swelling, and the firmness of the bones beneath; hence the conclusion that the tumour was of an aneurysmal character. The question, however, arose as to the precise nature of the aneurysm. Owing to the smooth surface and anatomically defined margin of the tumour, the absence of diminution in pulsation and size on compressing the temporal and its anastomotic connections, and the existence of intra-cranial symptoms, I formed the opinion that, in all probability, the tumour was a false aneurysm circumscribed by the temporal fascia and muscle with intra-cranial vascular connections, and. therefore, probably supplied by the middle meningeal or deep temporal arteries, or by both.

Owing to the sufferings of the patient, his inability for work, and his own personal solicitations, an operation was determined upon, and was accordingly performed as follows:—The superficial temporal artery was exposed by a small incision immediately above the zygoma, and ligatured. A curved incision was made along the line of the temporal ridge, commencing a little in front of the coronal suture, and terminating below and behind at the posterior root of the zygoma. The integuments were reflected downwards and forwards and the temporal fascia was laid bare. The temporal fascia was then carefully divided over the centre of the tumour and reflected, when a highly vascular and convoluted mass was disclosed, bearing considerable resemblance to the living brain and its membranes when the dura mater is removed. On close inspection this mass was found to consist of very large and tortuous thin-walled vessels, which freely anastomosed. An attempt was made to ligature the larger vessels at the circumference, but, after a few trials, this

was found to be unsatisfactory, as the walls of the vessels were so thin that they would not bear the pressure of a ligature or forceps, and the hæmorrhage was exceedingly copious. I then determined, with the consent of Professor O'Sullivan, who rendered me valuable assistance throughout the operation, to attempt its removal with the Paquelin's cautery knife. This I proceeded to do from behind forwards, keeping close to the bone. Very little trace of the temporal muscle was recognisable, its place being occupied by blood-vessels. Numerous small vessels were encountered issuing from apertures in the bones. On reaching the fissure previously referred to, the hæmorrhage that took place was truly appalling, and could not be completely controlled by direct pressure combined with pressure on the carotid. One very large and several smaller anastomosing vessels issued through the aperture, which was situated in the coronal suture, about $\frac{3}{4}$-inch above the anterior-inferior angle of the parietal bone. The hæmorrhage was, however, successfully arrested by inserting a cautery in the fissure at a dull-red heat, and maintaining it in that condition for some minutes. The tumour having been removed, and all hæmorrhage having been checked by application of the cautery at all the necessary points, the integuments were replaced and sutured, except where drainage tubes were inserted at the posterior and lower portions of the wound. Careful graduated pressure was applied, especially over the region of the fissure.

My original intention, if found feasible, was to trephine the skull after dealing with the intra-cranial tumour, but, owing to the conditions I have described, I think you will agree with me that such a proceeding would have been rash and unjustifiable.

The progress of the case subsequent to operation was very satisfactory. There was no secondary hæmorrhage, of which I had considerable fear. The scalp wound united by first intention, except at the seat of the drainage tubes, through which some suppurative discharge took place for a fortnight—no doubt owing to the free use of the cautery.

The patient experienced very great relief from his symptoms very soon after the operation, and slept remarkably well. He left the hospital November 24th, feeling wonderfully well, and with the intention of again engaging in business of some kind.

The points which I consider specially worthy of debate in this case are the following :—

1. The probable origin of the tumour.

2. Was it possible to diagnosticate the precise nature of the aneurysm previously to operation?—the cirsoid condition of the superficial temporal being suggestive of aneurysm by anastomosis.

3. Was an operation advisable or justifiable?

4. What was the probable intra-cranial condition? I believe it to have been an aneurysm by anastomosis of the meningeal blood-vessels.

5. I may point out that the bones themselves were perfectly healthy, and, therefore, the case was not of the nature of a pulsating bone tumour.

Since reading the above paper at the Academy I saw the patient. He said he was perfectly well, and was looking out for occupation. He was perfectly free from head symptoms. Hence, I think I am justified in concluding that there was no intra-cranial aneurysm, and that the head symptoms were due to the dilated condition of the middle meningeal itself.