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Reprinted from the New York Medical Journal for March 14, 1908.

A CASE OF ACCESSORY SINUS DISEASE WITH THE SYMPTOMS OF AN OSSEOUS TUMOR OF THE ORBIT.*

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The subject of this report was a lad of fourteen who a year previous to his coming under my observation had noticed a reddened swelling at the inner side of his right orbit. He had been told at a local dispensary that this was caused by "tear duct trouble." The swelling was soft at first, but in eight months it became hard, and began to increase in size and density, though without pain. Later, the eye became slightly displaced, and the patient grew anxious because of a very annoying diplopia.

When I examined the boy for the first time, in January, 1905, the inner half of the orbit was occupied by a bulging mass, and the eye was pushed outward and downward, and could not be rotated inwardly. The mass was dense and appeared to have its base at the nasal and lacrimal bones and along the inner orbital wall. It extended laterally into the orbit about a half inch, and it could be palpated for three quarters of an inch horizontally backwards. It was irregularly nodular in shape, and projected forward to about the vertical plane of the cornea. It was not sensitive even to deep pressure. The tear ducts gave free passage to small Bowman's probes.

The patient was active and wiry, a member of a boys' choir and inclined to pay much attention to his personal appearance. He had never been annoyed by colds in his head, and had never received any injury to his orbital or facial bones.

There were no obstructions in the nasal or faucial passages, nor were there discharges on their membranes.

*Read at a meeting of the Section in Ophthalmology of the College of Physicians of Philadelphia, February 20, 1908.

The accessory sinuses were not examined as there was no symptom of such importance to lead me to believe they might be diseased. I did not express an opinion upon the probable cause of the swelling in the orbit. The patient was instructed to use an alkaline nasal douche daily and he promised to return to my office in two weeks.

He returned in ten days because of marked conjunctival congestion and he said he could not see so well with the right eye. The acuity of vision was 5/15. The optic disks were pale, though the retinal veins were engorged. I believed then that a bony tumor had involved the inner wall of the orbit, and, because it appeared to be pressing upon the ocular structures, I advised the boy's mother to have the tumor removed, but I requested her to consult a general surgeon before she accepted my opinion. She took the boy to Dr. Gwilym Davis, and he gave an independent verdict that it was an exostosis of the orbit, and urged the immediate excision of it.

On February 4, 1905, with Dr. Davis assisting me, I undertook the operation at the private building of the Germantown Hospital. The incision was begun along the upper orbital margin, carried in a semicircle down over the tumor, and ended at about the middle of the lower margin. The soft parts were separated deep into the orbit. Rather free hæmorrhage followed. The tumor was circumscribed and projected irregularly. In the dissection of the periosteum the instrument suddenly penetrated the bone, and a bead of thick tenacious mucus exuded. This opening was at once enlarged to the full size of the tumor. An almost incredible amount of thick mucus was removed before the cavity could be exposed; then it was found that the ethmoidal sinus had been entered. The cells had been absorbed so that exploration was carried on easily. The cavity extended back to the sphenoid, up to the frontal sinus, and the inner concavity to beyond the median line, while the outer wall projected far into the orbit. The walls were scraped; and as there was no opening into the nose, one was made with the curette. Two rubber drainage tubes were inserted, one far back into the cavity, the other upwards and forwards, and brought out through the nostril. The soft tissues were placed over the orbital opening, and the wound was closed by several silk sutures. The dressings included the tubes.

The patient recovered promptly, and no untoward events occurred. The cavity was douched daily with solutions

of hydrogen dioxide. After six days the tubes were withdrawn ,and the sutures were removed, so that in eight days the boy was able to come to my office for treatment. The aperture in the ethmoid allowed free drainage to continue into the nose.

For about four weeks the external cicatrix remained prominent, but it became reduced when the osseous apperture began to be filled in. Two months later the sinus was draining satisfactorily, though a plug of mucus was held in the opening; and, when deep pressure was made over the orbital opening a bubbling sound was emitted as though there was an accumulation of mucus. The boy stated there was no noticeable discharge from his nose. He had great comfort. The eye had become straight again; he was relieved of the diplopia, and the vision had returned to normal. The optic nerve had lost its pallor, and in all respects the fundus appeared to be as healthy as that of the other eye.

On November 16, 1907, nothing but the cutaneous cicatrix and a rather broad nasal bridge gave external signs of the former state, while the visual and ocular conditions were normal, and the nasal cavities were healthy.

The case is interesting on account of the question of diagnosis. Had the tumor been soft and painful, or had there been discharge from the nose, the ethmoidal origin of the trouble would have been suspected. But all these were absent, and the extreme hardness of the tumor, with lack of tenderness or pain or nasal trouble, caused one to regard it as a possible osseous tumor. The characteristics were explained by the fact that the bone was bulged forward, and the enlargement was really beneath it instead of above it.

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