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## SEVERE CEREBRAL SYMPTOMS.

### REMOVAL AND RECOVERY.

By URBAN PRITCHARD, M.D., F.R.C.S.,

AURAL SURGEON TO KING'S COLLEGE HOSPITAL; SENIOR SURGEON TO THE ROYAL EAR HOSPITAL, LONDON, ENGLAND.

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# A CASE OF FOREIGN BODY IN THE EAR PRODUCING SEVERE CEREBRAL SYMPTOMS; REMOVAL AND RECOVERY.

By URBAN PRITCHARD, M.D., F.R.C.S.,

Aural Surgeon to King's College Hospital; Senior Surgeon to the Royal Ear Hospital, London, Eng.

(For references to temperature, see accompanying chart.)

In April last a boy was admitted into King's College Hospital, under Mr. Henry Smith, with a foreign body in the left ear, which was producing severe inflammation and cerebral symptoms. Mr. Smith transferred him to my care, and I received the following history:

J. J., a country lad, aged 14½ years; five years ago, while playing at conjuring, he accidentally pushed the seed of a locust-bean into the left ear. This produced no irritation or particular annoyance at the time, nor until about six weeks before admission.

Three years ago he had a sunstroke, which laid him up for six weeks, but from which he apparently quite recovered.

Six weeks ago the left ear became very painful and a discharge of purulent matter appeared. He was seen by Dr. Tucker, of Farmingham, who succeeded in removing a portion of the seed; but the pain and inflammatory symptoms increased, and the discharge became very profuse. Soon after the patient became subject to attacks of intense headache, chiefly referred to the occipital region. Dr. Tucker at length succeeded in persuading his parents to send him up to King's College Hospital, and he was admitted on April 21, 1879.

Condition on admission: A well-grown lad; not very intelligent, but his mother states that he was always somewhat dull and heavy; complaining of severe headache, chiefly in the occipital region, profuse discharge from left meatus, tenderness with occasional pain in parts around the ear. Pharyngeal mucous

membrane congested and slight ulceration on each tonsil. Hearing only with right ear, and not quite normally with that.

On examining left meatus by speculum it was found completely blocked up by a circular fringe of polypoid growths; on carefully introducing a probe, some hard substance was distinctly felt close behind the small growths. The house surgeon (Mr. Hugh Smith) succeeded by gentle means in removing a small portion of the dark skin of a seed.

April 28.—Since admission he has had several attacks of severe occipital pain, which has been relieved once or twice by epistaxis; there has been no vomiting, the temperature has fluctuated considerably, varying from 100.4° F. to 104°. The meatus has been syringed out with a solution of lead and morphia night and morning. Deeming it unwise to wait any longer, I proceeded to operate for the removal of the seed.

*Operation.*—The patient being under the influence of ether, and a good light (daylight) directed into the meatus, I proceeded to remove all the polypoid growths by means of forceps. These having been removed, the blood cleared, and the bleeding stopped by syringing out the meatus with a dilute solution of perchloride of iron, the black mass of the seed was distinctly visible by means of the speculum; the presenting part was rough and felt like cartilage, so much so that at one time I feared I was touching necrosed bone. I next endeavored by forcible and prolonged syringing to remove the seed, but entirely failed to remove the chief mass. However, the two cotyledons were syringed out, and some small pieces of the skin of the seed.

I then tried to dislodge it by the gentle use of probes, forceps, etc., so as, if possible, to allow space for the water from the syringe to pass, the return current of which might bring out the foreign body. All these means failing, I endeavored to insinuate with great care a Lister's hook between the wall of the meatus and the seed, and after several failures at length succeeded; then rotating the instrument a little and withdrawing it, I succeeded in extracting the remaining portion of the seed. This had swollen to the size of a small hazel-nut, and in substance closely resembled cartilage.

May 1.—The temperature rose after the operation, but has now fallen to 101°, pulse 80. There is only a very slight discharge from the meatus now, but he complains of great pain in the head.

May 5.—The temperature, which had fallen yesterday morning to 98°, rose last evening to 105.4°, pulse 120, and the headache, which had been diminishing in severity the last day or two, has again come on intensely. There is tenderness on percussion about one inch and a half behind and a little above the level of the left mastoid process. Bowels constipated; enema ordered. Discharge from ear has ceased; no tenderness on pressure about meatus.

May 6.—Bowels opened three times; great pain in occipital region; a blister ordered behind left ear.

May 8.—Yesterday pain better after blister, and temperature fell to 100° in the morning, but rose again in the evening. An incision made through scalp right down to the bone, an inch in length, about one inch and a half behind left auricle, which was followed by free hemorrhage.

May 12.—There was some relief to the pain after the incision, but the temperature has been fluctuating. Wound plugged with carbolized lint.

May 15.—Temperature fallen to 97°. Not so much headache, but patient losing flesh.

Meatus carefully examined. No discharge, no sign of any polypi; surface quite normal, except a little abrasion at the upper and posterior portion.

Membrana tympani somewhat thickened, handle of malleus only just discernible. Hearing distance increased to 1½ per cent. as measured by watch. Tuning-fork on bridge of nose heard distinctly and normally on left side.

May 19.—Temperature has been fluctuating. Hearing distance increased to 4 per cent.

May 26.—Much improved since 21st; has had no headache for about ten days. Hearing distance, 4 per cent., increased to 7 per cent. after inflation by Politzer's bag.

June 5.—Has been improving and gaining flesh since last note. Hearing distance: right ear, 30 per cent; left ear, 16 per cent.

June 9.—Hearing distance: left ear, 20 per cent.

June 11.—Discharged, looking stout and well.

*Comments.*—There are many points of interest in this case, but I shall only remark on two, which appear to me to be especially interesting:

Firstly, the pathological connection between the primary lesion in the meatus and the secondary lesion within the cranium.

Secondly, the question of the proper mode of treatment in these cases.

*Pathology.*—In tracing the ear mischief to the brain, the following considerations will act as guides:

(*a*). The internal ear could not have been the seat of any lesion, for it performed its functions properly, as shown by the tuning-fork (when applied to the bridge of the nose) being heard more distinctly on the affected (left) side, which of course is the case when the external or middle ear is affected, and not the internal. Further, there were no symptoms of labyrinthine vertigo.

(*b*). There were no symptoms of inflammation in the mastoid cells, which is so commonly the link between disease of the middle ear and of the meninges. The only indication of middle-ear affection was some slight catarrhal block of the Eustachian tube. And further, there was no hole, or sign of old hole, in the membrana tympani. From these considerations it is quite clear that the connection was not through the internal or middle ears.

Therefore the extension must have been directly through the bony wall of the meatus, probably the upper portion which is in close proximity to the brain.

In post-mortem examinations, in similar cases, I have on several occasions traced injected veins from the diseased part through the bone to the inflamed meninges, and I have no doubt that the extension is through the veins, frequently against the usual current of the blood.

In this case I presume that, the source of irritation and infection in the meatus having been removed, the cerebral disease was arrested just short of suppuration, and thus the patient was enabled slowly to recover.

*Treatment.*—In determining the proper mode of treatment in such cases, the following points must be noted.

(*a*). That a foreign body may remain in the meatus a very long time without producing any serious lesion, as shown by this and many other cases on record.

(*b*). That, after unsuccessful attempts at removal by the introduction of instruments, the symptoms may be much aggravated, for the substance will then act really as a foreign body in the irritated meatus.

(*c*). That in such a condition the inflammation is very liable to extend to the brain.

(*d*). That there is great difficulty in removing seeds which have swollen: this seed must have swollen to more than twice its diameter.

These considerations lead us to make a few practical suggestions as to treatment:

1. That a foreign body which is not irritating the meatus may be left to a convenient season for removal; but that if the body be a seed, it should not be left long enough to swell.

2. If syringing fails, as is often the case with a swollen seed, that no attempt at removal be made by means of instruments introduced, until all the conveniences and appliances are at hand to insure success.

I would further add that the greatest possible care and gentleness should be employed, so as not to lacerate the membrana tympani, nor even the skin of the meatus, if possible.

Lastly, I am sure I shall not be considered presumptuous by suggesting that all cases not relieved by syringing, and likely to prove difficult, should be placed in experienced hands without resorting to any haphazard attempts at removal.