SOME UNUSUAL CASES OF FRONTAL SINUS SUPPURATION.¹

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THE object of the paper is to produce a discussion on the management of frontal sinus cases in which some unusual feature presents itself. A series of cases are detailed which show some of the difficulties and complications which one may meet, and the means which may be employed to secure fairly good results.

Frontal sinus suppuration is not infrequently seen by the general practitioner, and overlooked, since the patient may complain simply of an inflamed eye, a nasal discharge, or what is at first thought to be supra-orbital neuralgia. Severe head colds lasting longer than usual and associated with severe frontal headache and constitutional disturbance should excite suspicion of ethmoidal or frontal sinus empyema. Morphine seems to have little power in these cases. Measures directed to insure free drainage in the middle meatal region alone give prompt relief.

Frontal sinus disease is generally accompanied by antral suppuration. The antrum in many cases acts as a reservoir for the secretion from above. In cases in which the antral suppuration is due to the sinus above lavage through the inferior meatus of the nose, performed only a few times, may be all that is necessary to cure the suppuration here; of course, the frontal or ethmoidal disease must also be attended to.

Post-nasal discharge—a symptom very commonly complained of in this country—may be due entirely to purulent secretion flowing from the frontal sinus. The ill-health which in not a few cases is so marked as to make one think of tuberculosis wonderfully improves by measures directed to check the auto-intoxication.

Some case notes will, I hope, be of interest to you and may bring to your minds cases of your own in which there was some unusual or important feature that will teach us something regarding the management of these cases. It is the unusual case or the complications associated with this disease that give us the greatest difficulty; and if we write or speak of our difficulties and failures it will not only make us better for having done so but will make every operator more at ease when similar cases come his way.

¹ Communicated to the Section of Laryngology and Otology, at the Annual Meeting of the British Medical Association, held in Toronto, August, 1906.

CASE 1.—A lady, aged twenty-one, consulted me regarding a post-nasal discharge, or, using her own expression, "a dropping in the back of the throat." I cite this case because the symptoms are those which a large proportion of my patients complain of. The condition was of some years' duration and had not been influenced by anterior and posterior nasal sprays. Every winter for the last few years whenever she caught cold it seemed to settle in and about the eye. When accompanied by a head cold very marked frontal pain ensued. Anteriorly could be seen a very marked enlargement of the anterior end of the middle turbinated body and a few small polypi bathed in thick creamy pus in the middle meatus. Posteriorly a large quantity of creamy pus flowed over the extremities of the turbinates. The anterior end of the middle turbinal was removed as a preliminary. On seeing the patient after a few days she informed me that her complaint had been entirely cured, but there was now a very disgusting discharge from the nostril, something she had never had before I operated. It was only after a good deal of talking that I was able to convince her that it was the same discharge flowing in a different direction. The antrum was washed through an opening made beneath the inferior turbinal and a large amount of very offensive pus was found. The frontal cavity was irrigated intra-nasally for several weeks, when the discharge stopped. No further irrigation or treatment was used for the antrum, which evidently had been filled from the sinus above.

CASE 2.—Lady, aged thirty-three. This patient had been a sufferer from what appeared to be supra-orbital neuralgia and nasal discharge. For many months, at eleven o'clock each morning, with very marked regularity, she had a severe attack of pain in the forehead. The pain would nearly drive her wild, necessitating her going to bed for several hours. Morphine in large doses gave almost no relief. Both frontal and maxillary sinuses were quite dark on transillumination. The floor of the left sinus was exceedingly tender, but not bulging. A polypoid condition existed in both meatal regions. The unusual feature about this case was in the progress of healing after an external operation on the frontal sinus. The left frontal and left antrum were operated upon at one time. The temperature at the time of operation was 103°. Pus under pressure was found in the frontal sinus. This cavity was very large, extending quite to the outer end of the orbital ridge.

The patient was much better for the next two days, the temperature ranging from 99° F. to 100° F. On the third day she developed a temperature of 103° F., and at night 104° F., accompanied by marked distress in the head. The packing was removed from the wound, permitting a free flow of pus and giving immediate ease. It was now quite plain that I had missed some offshoot from the sinus, though I felt quite safe after the first operation. On mopping the cavity dry I noticed pus coming from above through a very small opening, into which a fine probe passed a considerable way towards the junction of the front part of the forehead and the scalp. A general anæsthetic having again been administered, I laid open this cavity. It was quite large, and made with the sinus proper an L-shaped figure. Everything now progressed quite nicely, and when the granulations had almost closed the external wound a reinfection of the cavity took place. At first I suspected that the dressings might be at fault, so I asked the patient to again come to me. The source of infection was then found to be an acute exacerbation of the disease in the other sinus, there being a small perforation in the septum between the two cavities. The other sinus was then operated upon, and without any unusual features both healed promptly. In the first sinus, at the junction of the two lines forming the L, there was a very marked disfigurement. I was unable to make any improvement by using a paraffin syringe, as the skin constantly gave way. I therefore adopted Paget's method of dissecting up a large flap consisting of the

entire scar and tissues over the bone, and then plastering the depression with solid paraffin and suturing the flap in place. The cosmetic effect was excellent.

CASE 3.—A case of pan-sinusitis in a woman aged sixty-four, all the sinuses undergoing radical operation and complicated with a severe attack of facial erysipelas which infected the antrum, pharynx, and larynx, but not the unpacked frontal sinus.

This heading contains practically all I have to say regarding this case. The cellulitis began twelve hours following the external operation on the frontal sinus. The attack was exceedingly severe, and the constitutional disturbance was very marked. Antistreptococcic serum was freely used, but did not appear to have any beneficial effect. The temperature was invariably higher for a few hours after the injection. The sinus packing was kept wet with a 25 per cent. solution of argyrol, and was not removed for two weeks, as I feared to expose the venous channels in the temporal bone to such virulent injection. Ultimately the case did fairly well, though the injected antrum never became perfectly clean, and some ethmoidal disease was not eradicated. The sphenoidal sinuses were not very thoroughly cleaned out, as the age and constitutional condition of my patient seemed to me to call for milder measures.

Permit me here to remark that I have very great difficulty in curing the ethmoiditis in all these cases. Killian's operation on the frontal sinus makes exposure of the ethmoid more perfect; still, I feel I do not have that degree of success with suppuration in these cells that my reading makes me think others have.

CASE 4.—A case of frontal sinusitis, orbital phlegmon, and displacement of the eyeball downward and outward, due to a primary sarcoma in the right nasal fossa. (Reported at Canadian Medical Association in Ottawa.)

In this case the only complaint my patient made was diplopia and a swelling of the eyelid, as if stung by some insect. The pus was evacuated in the orbit, and after clearing out the nose of a large mass of sarcomatous material, free vent was given to the pus in the frontal sinus. The patient was made quite comfortable for some months, but within a year died of secondary involvement in the liver.

There is also a class of cases which causes me a great deal of worry as to the ultimate outcome and in which a deflected septum appears to be the cause. The after-treatment is here made easier by the use of Killian's specula, but even then I experience great difficulty in reaching all the diseased tissues. I feel sure one is not justified in correcting any septal deviation in the presence of suppurative accessory sinus disease.

CASE 5.—A case showing the intimate relationship existing between the eye and frontal sinus. A man, aged forty-one, complained of having caught a very severe head cold which caused him very great distress in his eye. Apparently he was suffering from a severe attack of conjunctivitis with iritis. The eyeball was tender, tension quite full but not + 1, conjunctiva intensely injected, and iris somewhat muddy and reacting feebly. There was but very slight tenderness in the floor of the frontal sinus. Intra-nasally was seen a deflected septum which, when straightened by Killian's long speculum, showed an enlarged middle turbinal pressed well against the bony septum. I was fortunately able to probe the

fronto-nasal duct quite easily, and while doing so was surprised to notice a little stream of muco-pus running along the probe. The patient was immediately much more comfortable, and by using menthol inhalations was rapidly well. The ocular condition rapidly subsided without treatment.

I wish here to mention a device which has served me well in clearing a sinus of its diseased membrane with the least injury to any healthy tissue. I refer to the use of felt or cloth burrs. Mayer and Meltzer have made for me felt burrs of various sizes, which, when attached to a dental engine, will facilitate very greatly the cleaning of the cavity, as well as assist very materially in checking the hæmorrhage. Stout linen wound around a large dental burr does very well indeed, and I have found it of very great service in cleaning the walls of the maxillary sinus and checking what is sometimes a very troublesome oozing.

In conclusion, I feel like apologising to you for taking up your time in presenting these few notes on cases which to me seem difficult and unusual, still to many or most of you may seem simple and commonplace. I cannot help thinking, however, that the status of the surgery of the accessory sinuses of the nose would be on a surer and more rational foundation if each of us would write rather of his failures and difficulties than of his success.

SOME CONSIDERATIONS UPON CERTAIN FACTORS IN THE DIAGNOSIS AND TREATMENT OF SUPPURATIVE LESIONS IN THE NASAL ACCESSORY SINUSES.¹

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IN any meeting of experts it may be assumed that their views upon the broad aspect of any subject to which they have devoted attention will in the main be one of agreement and will differ only upon points of detail. There are many such differences of opinion and practice in connection with the subject of my paper, and some of these would quickly disappear if at such meetings as this we discussed the details of our experiences, and more especially those which include our failures and disappointments.

Assuming, then, that we are all conversant with the main facts

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