CASE
ILLUSTRATING THE DIFFICULTIES OF DIAGNOSIS
OF
MORBID GROWTHS FROM THE UPPER JAW.
WITH REMARKS.

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THINKING that in the details of the following Case will be found some points of great practical interest, I venture to lay this communication before the Royal Medical and Chirurgical Society.

A man, æt. 25, was admitted into St. George's Hospital, under my care, in the month of May, 1848, with a large tumour, of an irregular shape, occupying various regions of the left side of the face. In the cheek, it formed a swelling, of the size of a turkey's egg, filling up the greater part of the superior maxillary region, the outline of the bone being perceptible to the touch in a few places only; the zygomatic arch, however, was much more prominent and more curved than natural, having been pushed forward by the growth of the tumour, portions of which could even be felt under the temporal muscle. The diseased structure was also found, in the shape of small flattened bodies, at the lower part of the orbit, lying immediately underneath the conjunctiva, and apparently quite moveable; the bones of the inner and outer walls of this cavity, as well as those forming its circum-

ference, were not in the least degree affected or displaced, but it was impossible exactly to make out the state of the bones at the lower wall, owing to the tumours which were here; the eye-ball was not more prominent than natural. Portions of the morbid growth were also detected in the left nasal fossa, from whence a small, round mass projected slightly, at times, into the pharynx; a probe was easily passed from the nostril into the pharynx, both above and below the tumour, and the finger, curved round the posterior border of the palate, there recognised a firm body which could easily be pushed from side to side; the shape of the nose was altogether unaltered. The roof of the mouth was free from disease, neither the teeth nor the bones in this region being in the least displaced; but the tumour was found extensively overlapping the front part of the alveolar process, and projecting beneath the lip. The diseased structure, wherever it could be fairly examined, appeared to be of a round shape, but lobulated; it was firm and elastic to the touch, and, at the back part of the pharynx, it was of a dead white colour and glistening appearance; in all the various regions which it occupied, it appeared to be moveable. The skin, conjunctiva, and mucous membrane of the nose, were quite healthy, and no enlarged glands could be detected in any part.

The patient stated that six years previous to his admission into the hospital, he was troubled with a disease, supposed to be a polypus of the nose, which was easily removed with the forceps; some little time afterwards, the cheek was, for the first time, observed to swell, and gradually increased in size; the tumour subsequently made its appearance in the orbit and other regions: but all this was unattended by pain, neither was there much inconvenience, except about the nostril, and even this was not very great. Finding that the tumour was steadily increasing in size, the patient, a year ago, consulted a person who attempted to destroy it with caustic, which had apparently been applied extensively in two different places, two large cicatrices being still visible in these parts; one of them, situated over the lower margin

of the orbit, had, by its contraction, caused eversion of the eyelid, the other was on the inside of the cheek. Little or no effect was produced on the disease by this treatment; the sores caused by the caustic healed kindly, and no fungating growths ever made their appearance at these spots. At various times, during the course of the disease, there had been extensive bleeding from the nose; these bleedings had somewhat reduced the patient, who was of a spare habit and pale; this paleness was accounted for by a loss of blood, which had occurred shortly before his admission into the hospital.

At a consultation of the surgeons, it having been decided that the removal of the upper jaw was justifiable in this case, I undertook the operation, the patient himself, before whom were laid all the dangers incident to it, being most urgent that something should be done for him.

Dr. Snow, to whom the surgeons of St. George's are so much indebted for the able manner in which he, for a long time, administered chloroform at the hospital, gave it on this occasion.

The patient being seated in a chair, the usual incisions were made, and the bones having been divided with a strong pair of cutting forceps, the superior maxillary and the malar were easily tilted out of their place; but it was then discovered that the disease was not connected with the upper jaw,—it was lying behind it. Hoping that I should, nevertheless, still be able to get away the whole of the tumour, I first removed the greater portion which was in view, dissecting it from off the pterygoid process to which it was attached. I then, by gently pulling, got out that part which was lying under the temporal muscle, where it was imbedded in loose cellular tissue; that portion which was in the orbit required some careful dissection, as it was partly attached to the conjunctiva. At this stage of the operation, as the patient became faint, he was placed in the horizontal posture, and a small quantity of stimulant was administered, by which means he soon rallied. I then proceeded to remove, with a pair of strong curved scissors, that portion of the tumour

which I found projecting into the nasal cavity. The pulse having again failed, the patient was at once laid on a bed, and carried into an adjoining room; different restorative means were made use of, and he appeared to rally somewhat: but shortly afterwards, observing that the breathing became difficult, Mr. Charles Johnson and myself thought it advisable, as a last resource, to make an opening into the crico-thyroid membrane, and, by means of a tube, to try and keep up artificial respiration. When the opening was made into the larynx, I observed that some frothy blood immediately made its escape; the tube was readily passed, but all our efforts were ineffectual, the patient continued to sink, and soon died.

Throughout the operation I met with but few vessels, and one only of any size; this, most probably the termination of the internal maxillary, was secured by a ligature; to the other vessels blue lint was applied: on the whole, no great amount of blood was lost, and there was no bleeding from the incision in the neck.¹

On examining the bones which had been removed during the operation, it was found that they had both undergone very great alteration in their shape, which had been produced by the pressure of the tumour lying behind them. In the superior maxillary, the antrum was all but obliterated; the posterior wall of this sinus having been forced against the anterior one, there was merely a chink left, the cavity of which was quite free, and lined by healthy mucous membrane; and, instead of a maxillary tuberosity, there was here a depression which had served partly to lodge the tumour during life. The malar process of this bone and the malar itself, very much expanded, were much thinner, and formed a much greater curve than natural: the osseous structure itself was perfectly healthy.

Sections of the various tumours presented, both to the

¹ I have avoided entering into any details about the chloroform, as I prefer sending, with this communication, a letter which I received from Dr. Snow on the subject.

naked eye and under the microscope, a well-marked and purely fibrous appearance.

The body was examined twenty-three hours after death, and a careful dissection of the parts concerned in the disease, for which the operation had been performed, showed that the morbid growth had originated in the roof of the left nostril, and especially on the inner side of the pterygoid process and under surface of the body of the sphenoid, to which parts small portions of the tumour were still found firmly attached. The sphenoidal sinuses were filled with diseased structure and very much dilated, so much so that, at one point, the bone had altogether disappeared, and left a small hole, where the tumour was lying in contact with the dura-mater. A small portion of the growth was also found at the upper and back part of the septum nasi, which was forced over to the right side, and partially destroyed by absorption; here the mucous membrane was somewhat thickened, and there was a small pendulous body, loosely connected with the velum palati, which was hanging by the side of the uvula. Small flattened growths, of a similar nature and a bulbous shape, were found deeply imbedded in the spheno-maxillary and temporal fossæ, as well as at the back part of the orbit; they were all connected to each other; none of them had any attachments to the bones, but they were connected with the growths in the nostril by a slender pedicle passing in the direction of the spheno-palatine foramen; the growth in the orbit had reached this situation by creeping through the spheno-maxillary fissure; the bones of the orbit were quite healthy. The structure of these growths resembled that of the tumours removed at the operation,—it was purely fibrous.

The trachea and the bronchial tubes, even to their minute ramifications, contained a quantity of frothy blood. The structure of the lungs was crepitant throughout, but each section presented numerous small, dark spots of ecchymosis, produced by some of the air-cells having been also filled with blood; these organs were otherwise free from disease. The heart was healthy; its cavities contained some small black clots, but the greater part of the blood was thin and fluid,

and did not coagulate on exposure to air.—The other viscera were quite healthy.

In considering the practicability of an operation in the preceding case, the first important point to be decided was as to the nature of the tumours, for, had the disease been carcinomatous, an operation would have been, in my opinion, altogether unjustifiable; but the details of the case, and especially the length of time during which the disease had existed, led to the conclusion that, in all probability, it was not of an encephaloid nature; the general opinion was, that it was of a fibrous character. The subsequent dissection and the microscopic examinations proved this opinion to have been perfectly correct.

The next question to be examined was the point of origin of the disease; and herein lay the great difficulty of the case. After a due consideration of all the circumstances,—the appearance of the tumour in the face, the various situations it occupied, and the history, it appeared most probable that the disease, having originated in the antrum, had burst through some of the walls of this cavity and made its way into the regions in which it was found; the palate, it is true, was not depressed, neither were the teeth affected, but this did not seem sufficient to me to invalidate such an opinion; for, although a tumour originating in the antrum will generally expand the walls of this cavity, it sometimes happens that the disease makes its way in some directions much more readily than it does in others. In the museum of St. George's Hospital, there is a preparation, which I put up some years back, in which a tumour starting from the antrum had made its way upwards, outwards, and inwards, bursting the various walls, but had left the palate unaffected.

A portion of the disease had, according to the patient's account, been extracted, some years previously, from the nostril; but the gradual swelling of the face, the tumour having subsequently made its appearance in the cheek, and the nose being altogether unaltered in shape, led to the

supposition that this was one of those cases in which a tumour had made its way from the antrum into the nose, from whence it had been removed as a polypus.

The possibility of the disease having arisen in the pterygo-maxillary fossa was discussed; but the probability of such being the case in the present instance was thought to be very slight.¹

The appearances noticed during the operation and the subsequent dissection revealed the true nature of the case. The growth, I have little doubt, began in the upper part of the nasal cavity, and from thence spread in the various directions already noticed. It had reached the pterygo-maxillary fossa, either by destroying a portion of the palate bone, or by originally passing through the spheno-palatine foramen; once in the fossa its subsequent progress may easily be traced; it passed into the orbit through the spheno-maxillary fissure; and, in the face, it had, in some parts, made the bones yield, and, in others, it had so completely moulded itself to their shape, creeping over their cutaneous surfaces, that the outlines of the bone were scarcely discernible.

That a polypus of the nose, of a purely fibrous character, should take the course which I have just described, is, I believe, of very rare occurrence; some cases have, however, been recorded, which show that these growths do sometimes make their appearance in regions where one would little expect to find them. Such was the case in a patient lately operated upon in St. George's Hospital by Mr. H. Charles Johnson, where a fibrous tumour, lying in the orbit, was ultimately traced, by its pedicle, into the nose, through a hole in the inner wall of the orbit; and yet there was nothing about this patient to lead to the supposition that the disease had originated in the nostril.

¹ A case of this nature is quoted in the twenty-third volume of the *Archives Générales de Médecine*, in which a lobulated fibrous tumour, originating, according to the Docteur Del Greco's report, in the pterygo-maxillary fossa, had made its way into the various regions which were occupied by the tumour in the patient at present under consideration.

I purposely avoid alluding to the growths of an encephaloid nature, so frequently found in this locality, as their mode of progress usually differs widely from that of the purely fibrous tumour; readily insinuating themselves through the fissures, they not unfrequently make their appearance in regions far from that in which they originally began.

Some of the appearances observed in the post-mortem examination naturally lead to a question of great practical importance in the present day. I refer to the blood which was found in the air-cells and bronchial tubes. In my mind there is no doubt that that blood found its way into these parts by passing through the glottis; and if this was the case, it may fairly be asked, whether such an occurrence would have taken place had no chloroform been used,—the probabilities are that it would not. It is, I believe, now generally admitted that one of the effects, both of chloroform and ether, is to suspend the irritability of the glottis, whereby in those operations about the mouth, in which there must be a certain amount of hæmorrhage, there is a risk that some of the blood may find its way into the windpipe, without there being any cough excited to expel it; and several eminent surgeons, both abroad and in this country, have not failed, of late, to condemn the administration of these agents in operations of this nature. Some surgeons being unwilling to submit their patients to all the pain incident to such serious operations have, however, adopted a middle course, administering the chloroform in the first steps of the operation only, hoping thus to avoid all risk; but it remains still to be proved whether, even with this precaution, there may not be danger in using anæsthetics in some operations about the mouth.

Letter from Dr. Snow referred to in Mr. Hewett's Paper.

On May 18th, 1848, I administered chloroform, at St. George's Hospital, to a young man with a tumour of the superior maxillary bone. The vapour was given to him rather slowly with the apparatus which I generally employ; and he became gradually insensible, without previous excitement or struggling. In about three minutes, the inhalation was suspended, and some teeth were extracted without causing any sign of pain. A little more chloroform was given, that the operation of removing the tumour might commence, whilst the patient was under its full effect. When the inhalation was discontinued, he was in the condition that has been named the third degree of narcotism. He was passive, but the muscles were not relaxed, and the breathing was not stertorous. He remained quite silent and motionless during the early part of the operation, whilst the flaps were made, but afterwards he began to groan and move his limbs, and was not again rendered altogether insensible; for, although a few minims of chloroform were sprinkled, from time to time, on a sponge, and held near to his face, he got very little of the vapour, as the hands of Mr. Hewett and the surgeons assisting him were constantly in the way, and the cavity of the mouth and nostrils was laid widely open. The only effect, indeed, that I could produce, was partially to lull the patient, on one or two occasions. During this time, the effect of the chloroform never exceeded the second degree, or that state in which the mental functions are confused, but not suspended. He executed voluntary movements of his arms and legs. Sometimes it was necessary to hold his hands, and, at one time, he appeared conscious, for he folded his arms, as if making an effort not to raise his hands to the seat of pain. He seemed a good deal embarrassed during the operation with the blood which flowed into his throat. He leaned forward once or twice to get rid of it, and I thought that he vomited some blood on one of these occasions.

In the course of the operation, and at a time when he was but little under the influence of chloroform, the patient became faint, he was laid down, and brandy was given to him. No more chloroform was administered after this time. When I left the Hospital, a little while after the removal of the patient from the operating theatre, he was much exhausted, but seemed quite conscious, and did as he was told. There was then no difficulty of breathing, and, in my opinion, the influence of the chloroform had altogether left him.