

was that of opening the cyst freely, and applying the concentrated nitric acid to its inner surface. It was necessary to do this with some caution, lest I should injure the joint or bone underneath; and therefore several applications of the acid were required. My object was to destroy the secreting surface, and obtain a granulating surface in its place; and when I last saw the patient, previously to her returning to the country, I had reason to believe that I had succeeded: but I have not heard of her since.

A tumour is occasionally formed on the instep, which, though not exactly a corn, bears a near relation to it. It is met with in young men who wear tight boots, and the usual situation of it is over the articulation, between the internal cuneiform bone and the metatarsal bone of the great toe. The tumour is under the skin, hard and immovable, so that it seems to a superficial observer to be an enlargement of the bone itself. The skin over it is in a natural state, except in cases of long standing, in which the cuticle becomes somewhat thickened. I have had no opportunity of dissecting the parts affected with this disease, and am uncertain, therefore, whether it be formed in the ligaments of the joint or periosteum, or in the ultimate fibres of the tendon of the tibialis anticus muscle, or in what other texture.

Such a tumour is productive to the patient of as much inconvenience as a corn, and it requires the same kind of treatment. He should, for a time, leave off boots altogether; or if he cannot do this, the boot-maker should be directed to provide a last with a projection in that part of it which corresponds to the situation of the tumour, so that the boot may not exercise any pressure on it. A piece of thick buckskin leather, with a hole in it to receive the tumour, will also give the patient immediate relief, and ultimately effect a cure: but the cure, of course, will not be permanent, if he continues to wear tight boots afterwards.

I have seen a tumour apparently similar to that I have now described, in school-boys, situated over the head of the tibia, at the insertion of the tendon of the extensor muscles, commonly called the ligament of the patella, and apparently the result of kneeling, or clambering on the knees: and a tumour of the same kind is sometimes met with on the inner condyle of the femur in those who ride much on horse-back. In either case the avoiding pressure is sufficient to relieve the patient of all the inconvenience which the disease produces. I have known cases, however, in which there have been some remains of a tumour over the head of a boy's tibia ever afterwards.

LECTURE XV.

ON POLYPI OF THE NOSE.

UNDER the name of polypus of the nose, although many affections have been confounded, I mean to include simply a peculiar excrescence of the Schneiderian membrane, which is not malignant. This simple polypus is much the more frequent among the higher classes of society, and is most common in *men*. It seldom occurs before puberty. I am not able to connect it with any particular habit. It is common among the Portuguese, and attributed by them to their snuff being adulterated with ground glass. It may be so, but I have not observed that snuff-takers in this country are particularly liable to it, though I believe that snuff is much adulterated here, as much, indeed, as medicine.

The tumour is generally attached by a thin neck to the Schneiderian membrane, or by a narrow pedicle, or a long, thin membrane, continuous with the Schneiderian, but less vascular. The polypus is very smooth, and but little vascular, though sometimes vessels burrow into it. It is gelatinous in density, and appears to consist of coagulated albumen. In a few instances there is but one polypus; but commonly there are two or three, and frequently clusters, so that you can scarcely count them. The colour, which it is essential to notice, is pearl-like, or white, mixed with brown, of an opal appearance. Soft polypi of this kind I have never seen attached to the septum nasi, the inferior turbinated bone, or any part of the nostril, but almost always to the cells of the ethmoid bone, though occasionally to the superior turbinated bone. A woman in this hospital some years ago, having symptoms indicating polypus in its early stage, died of another complaint, and after death, the cells of the ethmoid bone were found distended by a substance similar to polypus. The indications in the early stage that polypus exists, or is occurring, are merely an unnatural secretion of mucus; a great desire to blow the nose, such as may arise from common catarrh; but in catarrh the secretion lasts for a shorter period, whilst the discharge from polypus does not subside, on which account you may suspect incipient polypus. When bone, for instance, is affected, you have pain in the forehead, but there is none in polypus. The smell is affected, the patient fancying, perhaps, that he smells odours which do not exist; or the sense of smell may disappear, which is more common; the taste at the same time is injured, if not destroyed. These symptoms increase as the polypus gets larger, with obstruction of the middle meatus of the nose, and then of the inferior meatus. Respiration through the nose is imperfect, and at last the patient breathes only through the mouth; this is troublesome, especially at night, because the using the jaw in the day acts on the salivary glands; but at night

the open mouth is always dry, and the tongue becomes hard, like a board. At first there is no difficulty of blowing the nose, though afterwards there is, and the mucus is blown down the pharynx. These symptoms may, in their progress, occupy a year, or many years. If neglected, the polypus grows larger, in becoming more solid, and the base almost cartilaginous; sometimes it is large enough to hang down outside. It varies with the weather, swelling in a moist atmosphere; it is, in fact, an hygrometer to the patient, having a smooth surface and an opal, semi-transparent appearance. It may project, backwards, into the pharynx behind the soft palate, and then it may occasion giddiness, from pressure on the internal jugular vein, though persons generally procure surgical assistance before the case is so far advanced. But sometimes the disease is neglected, and I remember a man in this hospital who had had a polypus removed, but which renewed, and when he came was enormous, projecting from the nostril under the skin of the face. The patient died of cerebral symptoms, and after death there was found effusion in the ventricles of the brain, from the pressure of the polypus. I have seen, also, a boy, sixteen years of age, having a polypus of an enormous size, not less than my fist, hanging down at the back of the pharynx, which could be felt in the mouth, and which pushed out the ossa nasi, giving him a nose broad enough to cover half his face. I lately saw polypus cause absorption of the os unguis; it extended into the orbit. It was removed, and, I believe, successfully.

In the early stage, the existence of polypus is doubtful, if you cannot see it; but, by and by, you can discern it by dilating the nostrils with the forceps, near the window, and the more easily if the sun shines. If large, you can tell how far it extends; if it extend into the pharynx, by putting your finger into the mouth; if it extend to the brain you may tell that by the cerebral symptoms. Then, how are you to get rid of it since it is not under the influence of medicines, being quite local? After it has been removed, I have used local remedies to prevent its return, but medicines are only useful after removal; therefore straightway remove it. In common polypus, ligature is impracticable; and those who propose it can never have had any thing to do with the disease. It is impossible also to remove it by the knife, as you cannot see it, and when touched with a sharp instrument the blood directly flows so as to prevent your continuing the operation. Neither with the scissors can you see your way sufficiently. The best way of operating is with a proper pair of forceps, if you know how to use them. The proper forceps will pull away its neck. The *whole* of the opposite surface ought to be quite rough; convex above, concave below, opening laterally, so that it may hold the polypus tight. They should be pretty strong, and not slender, unless for small nostrils. If made with a screw in the handle, having a double worm, when the polypus is grasped, by proper manœuvring and screwing it tight, there is no danger of its slipping off. The procedure may be longer, but it is more certain. In a few cases you will want such forceps as these, which open from above downwards, but they are not often required. Any forceps should be oiled

and warmed, the patient in a chair with his chin elevated; get hold of the polypus near the base, by introducing the forceps upwards to the back of the nostril; place one blade on each side, tighten the forceps with the screw, and then—not merely pull it out at once, or the polypus will break off—but twist a little to each side, gently draw forwards, push backwards, twist it again and again, a few times, and then draw out the forceps with some force, and the polypus will come away entire. There may be several others, and if so, repeat the operation. The patient should blow his nose, so as to bring them all into view; if he cannot do so, you must endeavour to remove them without seeing them. There may be, also, a small one jammed in by the larger, which is to be seen on removing the latter. Having done all this, the relief to the patient is immediate.

In some cases one operation is sufficient; in others, two, or even three, are necessary. Be gentle in using the forceps; rough usage might impair the ethmoid bone, or even the cribriform plate. I never saw any inflammation result from the operation, or cerebral symptoms, or erysipelas. In one case hemorrhage followed, which I easily stopped by plugging the nostril with lint. Mucous membranes bear injury more readily than the skin, as in the case of internal piles.

In very old, firm, and cartilaginous polypi, there is great adhesion to the bone; but it is of no consequence if you remove a small plate of the bone with it, for at least that shows that the whole polypus has come away. In these cases I use a peculiar forceps, resembling those employed by ladies for cutting flowers, so constructed as to cut at the upper part, having a rough surface below, to hold the polypus. These shave off the polypus as near the bone as possible.

I will conclude my remarks on the extermination of common polypi from the nose by adding that in some cases you may know from what occurs at the operation, that there is a tolerable chance of the tumour not returning. In making this observation I allude to an occurrence that I met with to-day (Wednesday, Nov. 14th). A gentleman came to me with a polypus. There was only one that I could discover. In removing it, a portion of the cells of the ethmoid bone was taken away. There is no harm whatever in a part of the ethmoid bone being thus extracted; I never saw any ill consequences arising from it, and you may suppose, from the polypus being thus completely removed, that there is less chance of its return than there otherwise would be. Another polypus may arise from other parts of the mucous membrane, but certainly not from this.

Now, the polypus being removed, the patient will immediately experience very great comfort—great relief will follow the operation. But he will naturally inquire whether it will return, and you must answer that most likely it will, and that if it do he must again have it removed. But then he will probably put another question. Can you do any thing to prevent its recurrence, or to make its growth slow? I believe that you may retard its return in many cases, or even prevent it. About eighteen years since, a gentleman came to me with polypus of the nose. He had many times had polypi removed by a surgeon in the country; but he now came to London

and applied to me. I removed the polypus, and recommended him to employ what I had before found useful, namely, white precipitate ointment. It should be softened by holding it before the fire, and then, with a camel's-hair brush, you must paint the upper part of the nostril from whence the polypus seems to have originated. This must be done every day. It is a very mild application, and does not irritate. This gentleman very steadily persevered with the plan; he often came to me for other little complaints, thus I had an opportunity of watching the case, and the polypus did not return for fifteen or sixteen years, when I again removed it. I have seen other cases in which very great good appeared to arise from this local application, after the removal of polypi. Sometimes I have employed the ung. hydrarg. nitratis diluted, but I have more frequently used the white precipitate, and I prefer the latter. On the whole I think it is quite as effectual, and does not inflame the nostril, or cause sneezing, or plague the patient so much as the former. Its use, however, must be persevered in steadily,—not for a few days, a few weeks, or a few months, but even for years. The patient must learn to apply it carefully for himself, or get some one to apply it well for him. If the brush be merely introduced a little way into the nostril it can do no good. You must explain to him the direction which the passage of the nostril takes, and show him how to pass it up to the middle meatus, directing the instrument first a little upwards and backwards, and then directly backwards into the throat; and, indeed, the brush ought to be carried back as far as the pharynx, so that you may sweep, as it were, the whole roof of the nostril. You may use astringent lotions, which I have no doubt are sometimes attended with advantage, such as a solution of sulphate of zinc, or a solution of alum. Dissolve half a drachm of sulphate of zinc in eight ounces of rose-water, with a drachm of tincture of galls, and let the patient inject this with a syringe into the nostrils every day. This may more especially be employed where the nostril is narrow, and a camel's-hair brush of sufficient size cannot be made to enter it.

I have sometimes applied the nitrate of silver to the roof of the nostril from which the polypus grows. This must be used carefully, not because of any real harm that it will do, but if it be applied too extensively it will produce inflammation of the nostril. The upper lip, from the margin of the nostril, must be protected by smearing the parts with olive oil, otherwise the nitrate of silver will flow down upon them, and then, some time afterwards, when the patient has been exposed to the light, he will find a great black stain on his face.

A polypus occurs in the nostril of a different structure from that which I described in the last lecture—a fleshy polypus, apparently composed of firm, solid fibrin, with a very thin membrane over it. It is apparently of the same structure as the polypus that grows from the uterus, and sometimes from the rectum. I am inclined to believe that sometimes the common polypus alters its structure, and becomes a fleshy polypus; but certainly that is not generally the case. I think, however, it does occur in some instances; I know that in other cases a polypus is fleshy from the beginning.

These fleshy polypi have generally a narrow neck, as is the case with polypus of the uterus, and that which grows from the inner surface of the rectum. The polypus does not appear to me to be restricted to any part of the nostril, to the cells of the ethmoid bone, or the superior turbinated bone. I saw one of these polypi on the septum nasi, quite within sight. It was an inch in length and three inches in diameter, and attached to the surface of the septum nasi by a narrow neck. I introduced, not a pair of forceps, but probe-pointed scissors, slightly curved, and snipped off the polypus close to the septum. I applied nitrate of silver to its root, and when I saw the patient a considerable time afterwards, there was no reproduction of the polypus. In like manner the fleshy polypus of the uterus does not grow again after it has been removed by ligature. I had also a case under my care in which a fleshy polypus was attached by a narrow neck to the Schneiderian membrane in the lower part of the nostril, and quite within sight. I removed it in the same manner, but I cannot say whether it returned or not. Here (presenting it) is a fleshy polypus, which I removed by ligature; it hung down the posterior nares into the pharynx. In like manner to this the polypus of the uterus separates with the ligature attached to it. It is a remarkable circumstance that though, when you tie a polypus of the uterus, the ligature be placed below the origin, yet, when it comes away, the neck situated above the part to which the ligature was applied, has exfoliated along with the rest. Here is a polypus of the uterus (exhibiting it) in the act of separation under the application of a ligature. When I was assistant-surgeon here, a young man, a soldier, came to this hospital. There was considerable difficulty in both his respiration and deglutition, but there was nothing to be seen in the nose. On looking, however, into the throat, I saw, on the back part, an enormous tumour projecting the velum pendulum palati forward to the mouth. The tumour hung down further than the eye could follow it, but with the finger I could just reach its lower margin. On a careful examination it was found to be a great fleshy polypus attached to and descending from the posterior part of the nostril. It had been growing for many years. I removed this by ligature. I never saw or heard any thing of the patient afterwards; but as the operation was perfectly successful, and he was very soon well, I think that in the common course of things he would have come back if the disease had returned.

I have said that this polypus was removed by ligature. Now, it is much easier to *talk* of removing polypi in this way than to *do* it; for when they hang from the nostrils into the pharynx it is difficult to accomplish it. There have been many very ingenious contrivances for removing polypi in this situation by ligature, but according to my experience they are more ingenious than useful. You may apply a ligature to a polypus of the nostrils by a very simple apparatus much better than by any thing complicated. It is rather difficult to explain the method of applying a ligature when the tumour hangs into the pharynx, and yet those are the cases in which it is necessary to have recourse to this means for the removal of the polypus. When the

tumour is situated in the nostrils, it may be snipped off with a pair of scissors, or extracted by means of forceps. There is no difficulty in tying a ligature when you know how to do it, but, as I have said, it is difficult to describe the mode. I will, however, endeavour to make myself intelligible.

One method of tying a fleshy polypus that projects from the nostrils into the pharynx is this:—Pass a bougie into that nostril from which, judging by the exploration of the finger, you suppose the polypus to arise. It may have its origin from the septum between the two nostrils, and in that case you may pass it into either nostril, but generally by introducing the finger into the pharynx and turning it upwards, you will discover that the tumour arises from one or the other nostril. The bougie is to be passed through that nostril into the pharynx; the other finger must then be introduced into the pharynx, the bougie bent, and one end brought out at the mouth. Thus, one end of the bougie projects from the nose, and the other from the mouth. You fasten a double ligature to the end of the bougie that projects from the mouth, and the loop hangs down. You draw the bougie out at the nose; the ligature, of course, follows it; you cut it off from the bougie, and then the two cut ends hang out of the anterior nostril over the upper lip, the loop at the opposite end hanging out of the mouth. The ligature should be strong and well waxed, so as to make it stiff. It should also be very long, or you will find the operation difficult: it is easy to cut it shorter. The next step of the operation is to get the ligature over the tumour. For this purpose you cut through the loop hanging from the mouth, so that there are now two single ligatures. One end of the single ligature is to be passed through a silver tube, and putting the tube into the mouth and pharynx, you carry one end of the ligature under the base of the tumour on one side of it. You leave that out of the mouth, and your assistant holds both ends of the ligature to prevent it from slipping; then with the same silver tube, you are to take hold of the other loose ligature at the mouth, and carry that on the other side of the polypus, and there your assistant is to hold it. A knot that will not slip must then be made of the two ends of the ligature that hang from the mouth. You have a ligature now on each side of the polypus, and then, by carefully drawing the ligatures out at the end of the nose, you have got hold of the polypus at its base. A silver tube is then to be introduced into the nostril, and you tighten the ligature upon the shoulders of the tube in the same manner that you are taught in the lectures on midwifery to tighten a ligature on polypus of the uterus. It must be tightened every day till you have completely cut through the polypus. But if this were all, when the polypus was loose it would drop into the pharynx; that would be of no consequence if it were a small one, but if it were large it might choke the patient. To obviate this, after the ligature has been applied, pass a needle, with a strong ligature, through the polypus, and let the ligature hang out of the mouth, so that when the polypus is loose the patient may draw it out at the mouth. It was in this manner that I tied the very large polypus that I mentioned a few minutes since.

But there is another method that is still more convenient than this, and which I have employed on other occasions. It was the method adopted by Dessault. You require a silver tube by which the ligature is to be directed into the mouth, a shorter silver tube to be introduced into the nostril for tightening the ligature, and two pretty long ligatures. You introduce a bougie into the nostril and bring out one end at the mouth. To this you fasten a single and a double ligature; the single one must be very long. That being done, the bougie is to be drawn out at the nose, and, of course, the ligatures follow it. You then cut off the bougie, and you have the two ends of the double ligature hanging out of the nose, and the loop hanging out of the mouth; one end of the single ligature also hangs out of the nose, and one end out of the mouth. The single and the double ligature always pass on one side of the polypus; but by means of a silver canula you draw the single ligature to the other side of the polypus. The ligature being held in its place by an assistant, the end of the single ligature, projecting from the mouth, is passed through the loop of the double ligature, and the ends of the double ligature being drawn out of the nose, the single end follows, and you make a ligature which you fasten by means of a canula introduced into the nose. This method is easier in practice than the one I mentioned before, though it is more difficult to describe. (The lecturer illustrated the foregoing modes of tying the ligatures on a paper model held by an assistant.)

MALIGNANT TUMOURS IN THE NOSE.

There are tumours which grow in the nostrils, and are sometimes confounded with polypi, but which are of a malignant character. There is an example of one on the table. A boy was admitted into the hospital with this tumour, I think, in the left nostril, which caused considerable bulging of the ala nasi. On looking into the nostril I saw a tumour of a brownish-red colour, elastic to the touch. It had not the appearance of a common polypus. It seemed to have a narrow attachment outside of the superior maxillary bone, but no attachment to the nostril elsewhere, for a probe could be passed around it. It was doubtful whether it proceeded from the antrum or not; for at that time there was no apparent enlargement of the antrum. It was evidently too firm to be removed by ligature or forceps in the usual manner. I divided the ala nasi, and carried the incision through the upper lip. This exposed the cavity of the nostril, and then, having discovered the base of the tumour, I cut it through, removing it as close to the bone as I could. To that part from which the tumour was removed, when the bleeding had ceased, I applied lint spread with chloride of zinc and flour, in order to make a slough of the part from which the tumour had arisen. The wound made in the upper lip soon healed, as these wounds do, by the first intention. For some time there was no appearance of the recurrence of the disease, and about three months after the operation the boy left the hospital. He returned, however, about a month afterwards, there being then a great

deal of discharge from the nose, evident disease going on in the nostril, and a swollen belly. I did not then see him, for he was admitted, for the second time, just after I had resigned my office here. Paralysis of the lower limbs came on, and the boy died. On a post-mortem examination it was found that the disease had returned in the nostril, the tumour had destroyed, in a great measure, the ethmoid and sphenoid bones, and was seen lifting up the dura mater near a part of the ethmoid bone. It had also destroyed some of the bones of the face, and filled the cavity of the maxillary antrum. The same disease existed in other parts of the body. There was a tumour of the same kind attached to the xiphoid cartilage; others were connected with the vertebræ and ribs, and the bodies of the vertebræ were altered. There was a deposit of substance, similar to that removed from the face, between the vertebræ and dura mater of the spinal canal, pressing on the spinal cord, and accounting for the paralysis of the lower limbs. There was likewise some effusion into the ventricles of the brain. This was evidently a malignant tumour, which might have been mistaken for a polypus, although the appearance was so different from the common polypus that on removal of the growth the disease was readily distinguishable.

I have seen several cases of malignant tumour growing from the Schneiderian membrane. In some cases there is reason to believe that the disease begins between the periosteum and the bone; but I have no doubt that malignant tumours do sometimes grow from that membrane. A young gentleman was brought to me bleeding profusely from the nose. He was of strumous complexion, and one of that class of persons who are liable to a vascular condition of the mucous membrane of the nose. It was of a much more than usually bright scarlet colour, and, indeed, looked like scarlet velvet. The least injury to it would make it bleed, not merely a little, but to many ounces; and there was quite an alarming hemorrhage from a mere scratch with the sharp end of a probe. By and by he came to me with a sort of fungus growing from the diseased membrane over the inferior turbinated bone. This fungus was quite distinct, it was not larger than the end of the little finger, and was attached by a narrow neck. I snipped it off with a pair of scissors, but there was such a rush of blood that I could not tell whether I had removed the whole or not. The fungus returned; I suppose it was not entirely removed, and it grew rapidly. In a short space of time it filled up the entire nostril, and extended back to the pharynx, where it could be felt with the finger projecting the soft parts into the mouth. Mr. Keatè saw the patient with me; we examined the tumour very carefully, and hoped that we might be able to remove it by ligature, or, at least, to remove a part. It was tied, but it proved to have so broad a base that the little piece removed did no good whatever. The fungus grew in spite of every thing that could be done; it caused caries of the bones of the nose, destroyed the orbit of the eye, projected through the cheek, and ultimately the poor fellow died.

I saw another case of the same kind. The fungous tumour having originated in the Schneiderian membrane, occupied a great part of

the nostril, and then projected through the back of the pharynx. Sir Astley Cooper and myself attended the patient, and we agreed that it was better to remove that portion which protruded through the pharynx by ligature. I applied it in the way I have endeavoured to explain, with perfect ease. I took hold of the tumour with the ligature upon it, and in the course of a few days the ligature came away. Though a very large part of the fungus had been included in the ligature, it became so small and shriveled that it was hardly observable, just as is the case with what Dr. Clark calls cauliflower excrescence of the uterus. When that has been tied for some time, and the ligature comes away, the tumour being composed almost entirely of vessels, it vanishes; so it was here. The pharynx was cleared by the operation, but the tumour grew in spite of all that could be done, and we recommended the father, as we could do him no more service, to take his son away. I did not hear the result of the case, but I have no doubt that the patient died shortly afterwards.

From my experience of these malignant tumours, I should say—Let them alone. I never saw any ultimate good arise from any measures that were adopted for their removal; and, indeed, for the most part, malignant tumours in the nostril have so broad a base that any operation for their removal is out of the question.

LECTURE XVI.

ON DISEASES WHICH ARE SOMETIMES MISTAKEN FOR POLYPI OF THE NOSE.

I HAVE a few words to say concerning these diseases. The case that I shall first mention is a very common one. A young person, frequently a child, is brought having dilated pupils, a fair complexion and thin skin, with some difficulty of breathing through the nostrils, and perhaps rather more secretion from them than usual. On looking into the nostrils the Schneiderian membrane appears very turgid, more vascular than ordinary, and on the outside there is a tumour, an excrescence, sometimes small, at other times pretty large. This may be mistaken for a polypus, and, indeed, the disease puzzled me when I first saw it. This appearance, however, is produced merely by the thickening of the mucous membrane of the nostril at the anterior extremity of the inferior turbinated bone. I do not believe that the mucous membrane there is really more thickened than it is anywhere else; but it is more apparent in that situation on account of the projection of the bone.

In some cases in which the mucous membrane has been sufficiently thickened to obstruct the respiration through the nostril, I have introduced a pair of probe-pointed scissors, slightly curved, and snipped off a portion of the projecting mucous membrane. There is no harm