CLINICAL LECTURE ON DISEASES OF THE TONGUE.

Delivered at University College Hospital.

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GENTLEMEN,—I propose to-day to speak of the diseases of the tongue. Of course the tongue is constantly looked at simply as an index of disease elsewhere; and, as far as that is concerned, I do not propose to deal with it to-day, but to confine my observations to the surgical diseases of the tongue. I think you will find that the simplest way to consider these will be under three heads, namely, the inflammatory affections of the tongue, the ulcerations of the tongue, and, lastly, deposits in the tongue. Of course you will find them given differently by different authors, but, on the whole, I think that it is perhaps as convenient a way of putting it as any other.

First, as regards the inflammatory affections of the tongue. There is, of course, such a thing as acute glossitis, but it is very rare, and you have not had an example of it before you, that I know of, of late—at all events, not in my practice. Still you may meet with such a case, and it is well to know that patients are liable to a sudden great enlargement and inflammatory swelling of the tongue, which looks very formidable for the first few hours, and may sometimes prove dangerous to the patient's life by inducing suffocation. You may occasionally meet with it coming on apparently idiopathically, but more often it seems to be connected with the administration of mercury. A patient has been taking mercury for some reason; and, it is difficult to say why, he gets acute glossitis. Under these circumstances you find the tongue enormously swollen, filling up the mouth of the patient and almost suffocating him, and naturally requiring to be relieved immediately. The treatment is extremely simple—by making an incision on each side of the median line of the tongue. Do not mind a little free bleeding. Bleeding relieves the affection, and then with a little fomentation and simple gargles the whole thing subsides in a few hours. It really is not a very important affection, although it looks very alarming when you first see it.

What I want to speak more particularly about to-day are the chronic affections of the tongue. We get chronic inflammation of the tongue from various causes. Perhaps one of the commonest is the form which is due to smoking, for there can be no question whatever that tobacco has a deleterious effect upon the mucous membrane of the tongue. If you must smoke, and I suppose in the present day it is difficult for any young man not to smoke, pray smoke mild tobacco, and do not use pipes which are saturated with oil, and which, perhaps, have been smoked by other people.

Now, with regard to the chronic glossitis which is produced by the tobacco affection, you will find that authorities differ about it, but I agree with Mr. Barker in his essay in *Holmes's Surgery* that there is a condition of reddened tongue which is an early stage of chronic glossitis. When that has passed away you find a later stage where you have a development more or less complete (it varies, of course, in different patients) of a white patch. It may be simply a loss of epithelium—that is, a common condition which is sometimes known as "glazed tongue"—but you find in addition to that sometimes a development of white tissue in the tongue, of which you see a very good example in one of the illustrations in Mr. Butlin's book. We happen to have a patient who has been in No. 1 ward lately for an anal affection. I have pointed him out to you when you have gone round, as a remarkably good example of what is dignified by the name of "leucoplakia" or "leucoma," and I will now bring him before you; and let me remind you that when you examine a tongue, the first thing always is to dry it. I will dry this man's tongue, and then you will see clearly a white patch, which is partly the cicatrization resulting from an operation performed upon it. Here we have a good example of the results of chronic glossitis, which at one time seemed likely to run into more serious disease. We have

here a growth developed in the white patch, which at one time looked exceedingly like epithelioma, so much so that the man was admitted into the hospital in 1886 with the view of having part of the tongue removed. It was not removed quite so promptly as it would have been but for a Fellowship examination which was coming off, and we wanted the patient to be shown. I postponed the operation, therefore, and during the fortnight or so that he was waiting here the tongue improved so much under simple treatment that I made up my mind that it could not be epithelioma, and accordingly I simply scraped away the disease which had sprung up in the white patch, or beneath it, and the result, as you see, is that the man is now well. He has a perfect tongue instead of having lost part of it, and it is quite clear that it was not a case of epithelioma developing in a patch, but was simply hypertrophy of the submucous tissues, the result of chronic inflammation. Let me at the same time warn you that there is no doubt whatever among those who have carefully observed these cases, that a patient who has a white patch is more liable to epithelioma than the patient who has not a white patch. I do not like to put it more strongly than that. I do not say that every such patient will have epithelioma, but his chances of having it are greater than those of a patient who has not a white patch.

The white patch may of course go on and develop into a sort of warty growth, as you see here in one or two of these pictures, or it may develop into a condition which is sometimes badly called psoriasis; or again, it may develop by still greater irritation into what is sometimes called ichthyosis of the tongue. They are all degrees of the same disease. Ichthyosis was the name given by Mr. Hulke, who first called attention to it; and it is undoubtedly much nearer epithelioma than the white patch. There is a drawing here in Mr. Clarke's book which illustrates it very well. It is a very good representation of a highly hypertrophied and roughened mucous membrane. An ichthyotic tongue is so near epithelioma that it is just a question whether you should remove the tongue at once, or wait until there are positive signs of epithelioma. I think myself, if I had a well developed ichthyotic tongue, I should prefer to have it out at once rather than run any further risk.

Now let us take another class of case, where you have a chronic change in the epithelium due to syphilis. You may have a primary chancre. The early enlargement of the glands under the chin and jaw is very characteristic of chancre; but do not suppose that you will find that induration which we see so commonly on the penis, because you will not any more than you do on the lip. The cases of primary chancre on the tongue are extremely rare; but you must bear in mind that a patient may most innocently get a primary sore upon the tongue from another. If a patient hands, from a mouth which has mucous tubercles in it, a pipe, which must necessarily have some syphilitic saliva upon it, to another person who has a little sore or crack on the tongue, it is conceivable that the tongue may become affected, and the patient may have a primary chancre. Much more common than that, but still rather rare, are mucous tubercles. You find that a patient who has syphilis in the system sometimes develops mucous tubercles about the tongue, particularly on the back part of the organ.

But the most common syphilitic affection of the tongue is another form of glossitis—chronic glossitis with cracks in the tongue—which is well recognised as the result of secondary syphilis. The picture in my hand shows it well. You see the loss of epithelium in the centre of the tongue, and round the sides you see a cracked, cicatrised tongue. Those deep cracks, sometimes running quite far into the tongue, are as characteristic as anything you can have of secondary syphilis. Then, if you go further and follow out syphilis, of course you may have gummata in the tongue; but I shall put these under the head of deposits, and I will say a word now with regard to the treatment of that which is so common an affection.

The question arises, in the case of such a tongue as I have described, will you give mercury or iodide of potassium? Certainly, in a tongue like that you had better give small doses of mercury. It is true the patient may have had mercury before; but I find that these patients do better with small doses of mercury—which you can, if you like, combine with iodide—in the form of biniodide, or you may give it separately as liquor hydrargyri perchloridi. The thing I lay most stress on, however, is the local application of mercury. These tongues do well if you only pickle them in a mercurial lotion. It is of no use to tell the patients to use a mercurial mouth-wash and

then spit it out. They should be told to hold it in their mouths ten minutes by the watch, and breathe through their noses, so as to get the tongue thoroughly pickled with the lotion. As to the strength of the lotion, I advise you to begin with a quarter of a grain (afterwards getting a little stronger) of perchloride of mercury, with a little honey to make it more palatable, in an ounce of water. If the process of "pickling" is repeated twice or three times a day, the effect produced on the tongue is astonishing; the ulcers will heal under the mercurial treatment, the tongue will cicatrize, and the patient will recover a perfectly useful tongue, in which there will be no risk, so far as I know, of any future development of epithelioma. It is longstanding diseases that develop into epithelioma; but if you cure the disease and make the tongue healthy, or comparatively healthy, the patient will be no more liable to epithelioma than any other person.

Now let us go on and take the forms of ulceration, which we have from three different sources. You may have the syphilitic ulceration, you may have the tubercular ulceration, and you may also have the epitheliomatous ulceration. Syphilitic ulceration I have already mentioned in connection with superficial inflammation of the tongue. It is well that you should remember that there is another form of ulceration connected with syphilis, that is the ulcerated gumma. Some months ago we had in the hospital an old man, a foreigner, with very well marked ulcerated gumma on one side of the tongue. I took him in because he could not be attended at home, and he got steadily better under good treatment. He was here a week or two ago to show his tongue, and I then called your attention to how very much it was improved. The treatment of these ulcerated gummata is of course a little different from that of the ulcers occurring in the earlier stage of syphilis. Where you have ulcerated gummata of the tongue, it would be unwise to push mercury. You give iodide of potassium, and improve the patient's health in every possible way; and if you use the mercurial wash, not stronger than a $\frac{1}{4}$ to a $\frac{1}{2}$ grain to the ounce, you certainly get those tongues better.

The tubercular ulcer of the tongue is not a very common thing, and you see it more often in private practice than in the hospital. It usually occurs at the tip of the tongue, and is I believe very often determined by irritation from the teeth; at all events, I have found that by covering the teeth with gutta-percha, so as to prevent the tongue being rubbed against the back of the teeth, I have been able to get these tongues very much better. Here is an example in Butlin's book of a well-marked ulcer of the tip of the tongue, and where you find an ulcer in that condition you will generally find some evidence of tubercle in the lungs or other parts of the body. An ulcer like that you must treat as you would treat an ordinary tubercular ulcer elsewhere, namely, by scraping away all the diseased tissue. You may or may not find tubercle bacilli in it. I am not prepared to say which is more common, but at all events you should scrape the ulcer, and then dress it with iodoform, and treat the patient with cod-liver oil and by general anti-tubercular remedies.

Then we come to the third form, which is the malignant or epitheliomatous ulcer. Now, why does a patient get epithelioma of the tongue? Invariably, I believe, from some irritation. Patients with perfectly healthy tongues do not get epithelioma. But if you have a patient who has a white patch beforehand, which is a little irritable, perhaps scratched by a tooth, and which is kept in a state of irritation by the constant application of tobacco juice, one can easily imagine that developing into epithelioma. But as far as my experience goes, the greater number of cases of epithelioma are simply due to the local irritation of a rugged tooth cutting into the tongue; nothing has been done to relieve it, and then at last a development of epithelioma takes place. During the last winter I have seen two middle-aged gentlemen, both of whom had the very smallest patches of epithelioma that I have ever seen on the tongue from that cause. They both had sharp pointed teeth, and they were conscious that those teeth had been irritating their tongues. They went on, however, until at last they began to find something wrong, and then they took advice. In both cases I cut out the piece, and it was simply mucous membrane that was affected by the disease, which did not go down into the muscular fibre of the tongue at all; but still in both cases there was well-marked microscopic evidence of epithelioma. One may hope that by such an early removal as that, the patient may be completely relieved of the disease. Still, the great thing is to prevent the occurrence of such cases. I am happy to say that dentists are becoming better instructed every day; they are more

alive than they were to the importance of irritation caused by teeth, and they do send on cases at once, when they find anything suspicious about the tongue, to medical men and surgeons to see what the matter is. Too often, however, patients themselves are content to let the thing go on; and then at last they come with a ragged ulcer, which is undoubtedly epitheliomatous.

I quite allow that the very early stage of epithelioma is a little difficult to recognise; but when the ulcer is well developed, and the induration at its base has become well formed, no one can hesitate for a moment. Here we have three examples of epithelioma. An epitheliomatous ulcer is not simply an ulcer, but an ulcer with a growth, a growth springing up at the edges of the base and forming a protrusion, sometimes a distinct protrusion, as in this particular case, but more often like this other case, an indurated base of the ulcer with well marked granulations coming up into the cavity. Unfortunately, you have seen many of these cases, because we have a great many in the hospital at various times, and in hospital practice they do not come until very late, so late that generally the glands are enlarged. But in private practice we see them rather earlier, before the glands are enlarged, and I want particularly to impress upon you the importance of not waiting for the glands to become affected. It is very absurd that a surgeon should think to himself, "This cannot be cancer because there is no enlargement of the glands," and then deliberately wait and watch to see whether the glands become affected or not before he makes his diagnosis. That is all very good as regards diagnosis but very bad as regards the patient, and the patient who is waited for in that way is badly treated, for you ought, if possible, to get rid of the cancer before the glands become affected.

Let me now say a word about diagnosis, because that is really the important point. How will you diagnose a case of epithelioma when you see it? In the first place by the position. It is more generally at the edge and side of the tongue than anywhere else, and the history is pretty conclusive. You will find that for weeks or months the patient has had some irritation about the tongue; he has had an ulcer which has too often been constantly irritated by the application of nitrate of silver, and has developed more and more until there is the characteristic growth in the base and edge of the ulcer which I have mentioned. Then there may be tenderness of the glands of the neck. The pain, too, is characteristic; the patient tells you that it shoots up into the ear. I always dread that phrase, and never prompt a patient to use it, but as sure as he does so it is a case of cancer of the tongue.

Lastly, we have the deposits in the tongue, which I have mentioned incidentally, and which are of two kinds, the epitheliomatous, which always follows the ulcer and extends beneath it, and the gumma, which develops, as a rule, in the central portion of the tongue, and is apt to break down and give rise to a formidable-looking ulcer, as already described. Unquestionably an ulcerated gumma may develop into epithelioma, and it is these mixed cases which apparently improve for a time under iodide of potassium, and yet prove malignant after all.

What, then, is to be done for cancer of the tongue? Undoubtedly to palliate these cases is merely to lose valuable time, and the so-called "cancer cures" are simply swindles on the public. Chian turpentine stands on a different footing altogether, and I have used it where I thought it right as an adjuvant to surgical treatment, but I confess that I have never seen any benefit from it whatever. I have even sent a patient on whom I had operated, and who had a return of the disease, by his own wish, to Dr. Clay, of Birmingham, that he might himself carry out the treatment; but the patient died under the treatment, just as he would have done without it, and in about the same time, without having received the slightest benefit. I do not think there is any specific cure for cancer, and the only chance for the patient is to get rid of it as early as possible.

That brings me to the question of operations on the tongue. Of course there are many, but I am not going to trouble you with them all: it will be sufficient to tell you what we do here at the present time. We have all come, in most cases, to removing the tongue with scissors. Years ago, as you will find if you look into the records of the hospital, the galvanic *écraseur* was used, but we gave it up because it led to secondary hæmorrhage. It answers well for the time, if the battery is in good order, and you can remove the tongue without bleeding; but you are apt to get secondary hæmorrhage a few days afterwards, when the slough comes away. After the galvanic *écraseur* we used the wire *écraseur*. The best way of using it is Mr. Baker's modification of the opera-

tion—namely, to split the tongue down the middle, to loosen it from all its attachments beneath, and then divide with the *écaraseur* far back, taking one-half of the tongue at a time. Of course in many cases you remove only half; it is not necessary to remove the whole. We have most of us now given up that operation and gone to the intrabuccal operation with the scissors, generally known as Mr. Whitehead's operation. It is extremely simple. All you have to do is to gag the patient thoroughly—it is important to have a good gag; then, getting a firm hold of the tongue, with the scissors you divide the mucous membrane under the tongue and the muscles, and, drawing the tongue well forward, next divide it at the root, cutting steadily through till the lingual artery is exposed, when you can often pick it up before dividing it. Having done one side, you go to the other, if you remove the whole tongue, and treat it in exactly the same way. The result is that you get the tongue away as far back as you like with very little hæmorrhage.

Let me say, on the subject of hæmorrhage, that I myself introduced an improvement in the operation about the tongue some years ago, which I find most surgeons have adopted, namely, that when there is hæmorrhage and you require to stop it, you simply put your fingers down the patient's throat and hook up the base of the tongue and the hyoid bone. I found that out when assisting my colleagues in removing the tongue. We used to have occasionally sharpish hæmorrhage. It was my business to help to pick up the arteries, and I found that by putting the fingers well down I could stop the bleeding, making the tongue bloodless, and pick up the arteries quietly, as you might pick up an artery in a limb.

But then supposing you have disease of the tongue with enlargement of the glands, should you or should you not operate upon them? For myself I am not particularly fond of removing glands, yet I am obliged to do it from time to time. Where I find a patient has an ulcer of the tongue which is distinctly cancerous with infiltration in the submaxillary glands, I do not hesitate to make an incision and take the glands out. It becomes a little different when the glands of the neck are affected. In my experience cases where the submaxillary lymphatic glands are not affected and the glands under the sterno-mastoid are affected are the worst possible cases. If you cut out one gland, you find very soon afterwards that another becomes affected; and those patients, as a rule, have very short lives. Cases where you can remove the glands under the jaw merely do fairly well, as well perhaps as any of these cases. Because, after all, you must remember that recurrence is almost invariable, and one hardly knows of a patient with *bonâ fide* epithelioma living more than two years. Then in these cases where the glands are affected you may have seen some of my colleagues do a very large operation called Kocher's operation. You make an incision into the neck, turn up a large flap, and get down upon the glands; you then get hold of the tongue, and you can undoubtedly remove numerous glands and extensive disease of the tongue through that incision. I am not particularly favourable to it. It seems to me that in cases in which there is such extensive disease as to warrant an operation like that, we had better not interfere with the neck, but content ourselves with removing the tongue. That, however, is my individual opinion.

You saw me in the beginning of last session do an extensive operation on a man in the private ward, No. 1. He was sent up from the country with extensive disease of the tongue and of the submaxillary tissues. He was in a miserable state, and anxious to have something done. I told him plainly that I would operate if he wished, but I could not promise him anything more than temporary relief. On November 2nd I operated on him. The disease was so extensive that I thought it better to do tracheotomy first. I do not usually do tracheotomy in these cases; I do not hold with preliminary tracheotomy in ordinary operations on the tongue; but this was so extensive a case that I thought it right to do it. I was then able quietly to remove the whole tongue down to the hyoid bone, and a piece of jaw right up to the masseter on each side, and all the infiltrated submaxillary tissues. It is not the first time that I have done an extensive operation like that. The first case I had was in 1876, and the result of it is in the museum. The patient lived certainly four years after the operation, but he did not appear to have many weeks to live at the time I operated.

Still these extensive operations are not very satisfactory. This very patient, before he was really well, had a recurrence. The operation was on November 2nd, and he went out on December 2nd convalescent from the operation, but having already evidences

of a return of the disease. I heard from the friends that he had a recurrence, but I have not heard whether he is dead; the poor fellow cannot have long to live.

The satisfactory cases are those where the disease is entirely confined to one part of the tongue, where you can get well behind that portion and remove it at once, and where there is no infiltration of the glands. It rests with you, who will see these cases early, to insist upon the patients having an operation in early days if there is evidence of disease. When we get that sufficiently insisted on, unquestionably our rate of mortality and our rate of cure will very much improve.

The Registrar-General has pointed out that cancer is much on the increase. There are two or three explanations. No doubt many cases are put down as cancer which formerly were not recognised as such. Still even if that be so, I think, from my own observation, there can be no doubt that we do see more cases of cancer of the tongue than we did twenty or thirty years ago. One explanation is, I believe—you will excuse my saying so—the greater spread of smoking; and another, I think, is the greater spread of syphilis. Those are the two main elements which have to do with cancer of the tongue being so much on the increase. I hope that we shall be able to diminish it, and that by taking the cases early and by removing the diseased part thoroughly, we may be able to hold out some prospect to the patient of prolongation of life—we cannot honestly do much more than that at present.

THE PROCESS OF COMPENSATION AND SOME OF ITS BEARINGS ON PROGNOSIS AND TREATMENT.¹

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MR. PRESIDENT AND GENTLEMEN,—When my old friend, your esteemed Secretary, asked me in the name of your Council to read a paper and introduce a discussion at this meeting, I felt that it was impossible to refuse such a complimentary invitation, for which I now beg to return you my warmest thanks; but I did not, I fear, sufficiently appreciate the difficulties of the task to which I was committing myself; indeed, it was only after I had accepted your courteous invitation, and when I came to look about me for a subject, that those difficulties became fully apparent. After much consideration and not a little hesitation in coming to a decision, the subject which finally commended itself to me was "the process of compensation and some of its bearings on prognosis and treatment;" and I trust that in selecting this subject my judgment may have guided me correctly, and that it may prove both acceptable to you and the source of a good debate.

Speaking generally, and using the term in its widest sense, compensation may be said to include all those processes by means of which Nature endeavours to repair a damage done by disease or injury, to protect herself against the injurious results of disease, or to relieve, reduce to a minimum, and make bearable those results.

The basis of all compensation is the fundamental fact that the human organism as a whole, and each of its individual parts in particular, is, in ordinary circumstances—and granting, of course, that the condition is one of health—working below its full strength; that, in short, it possesses a large balance or reserve on which it can fall back when any sudden or unusual demand is made upon it.

Now the success of the result—in other words, the completeness of the compensation—depends upon several factors, the most important of which are:

1. The amount of the reserve.
2. The suddenness and extent of the call; or, in other words, whether time is allowed for the realisation or development of the reserve.
3. Whether the demand is temporary or continuous; in other words, whether the lesion is stationary or progressive.

I may perhaps be able to make my meaning clearer if I make use of a financial illustration.

¹ A paper read before the Border Counties Branch of the British Medical Association at Carlisle on February 24th, 1888.