

CASES  
OF  
(SO-CALLED)  
ICHTHYOSIS LINGUÆ.

BY  
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THE application of the term *ichthyosis* to a morbid condition of the tongue is of quite recent date. It was Mr. Hulke who first used the name provisionally in describing a case which he brought under the notice of this Society in 1864, and which was subsequently published in the second volume of the 'Clinical Society's Reports.'

The characters of the complaint are sufficiently distinct and sufficiently well marked to warrant us in giving it a distinguishing name, and in claiming for it a separate place in the category of disease. But it may yet be doubted whether *ichthyosis* is the best term for this morbid condition. At any rate, I have preferred to entitle this paper "Cases of (so-called) Ichthyosis Linguae," in order to show that I regard the name as still provisional, and possibly subject to alteration.

In its earlier stages the disease has much in common with simple warts, and it might be called a papilloma. It is also

in some respects similar to corns, but clinically it is widely distinguished from both these morbid conditions. Perhaps it is most akin to those rare flax-like growths which are occasionally seen on the gums, and which have been described by Mr. James Salter under the name of "Papillary Tumours of the Gum."<sup>1</sup>

But what are the distinguishing characters which entitle *ichthyosis linguæ* to be regarded as a separate and substantive disease? To this I reply—They are partly pathological and partly clinical.

1. It affects only the tongue and the inside of the mouth ; generally it is confined, at least at its commencement, to the dorsum of the tongue. In rare instances a somewhat similar condition may be seen in other parts of the body as a congenital defect. But as a morbid state supervening upon a previously healthy tissue it is, I believe, unknown elsewhere. No other mucous membrane is subject to such an affection.

2. It slowly spreads, or, having reached a certain point, it remains stationary ; but gives no pain ; only some slight inconvenience. In this state it may continue for many years—twenty or thirty years—but sooner or later it becomes epitheliomatous. This, as far as I know, is a peculiar

<sup>1</sup> 'Guy's Hospital Reports,' 1866. The disease here referred to was first described by Sir William Fergusson, from a case which occurred in his practice at King's College Hospital, when the writer was house-surgeon of that institution. The patient was an old man, aged 80, and the disease affected the lower jaw on the right side. A portion of the gum was covered by a soft, white growth, which "looked like vegetable matter, or greatly enlarged papillæ" ('Lancet,' September 6, 1862). It was removed and carefully examined by Mr. James Salter. He has described it as "a curious white mass, consisting of coarse detached fibres, pointed and free at one extremity and attached at the other ; in fact, it was a mass of papillæ, many of them nearly an inch long, similar in shape to the 'filiform' papillæ of the tongue ; their surface was shreddy and broken. Among these elongated processes were a few eminences like 'fungiform' papillæ, and these had a smooth unbroken surface. In microscopical structure I found [says Mr. S.] the mass to consist almost entirely of epithelium, principally squamous and flattened, but in other parts the cells were aggregated together in groups, reminding one of the 'bird's-nest' arrangement of epithelial cancer."

feature, and certainly it is very noteworthy. The congenital cases of a somewhat similar kind, which I have already mentioned as occurring in other parts of the body, have not, to my knowledge, shown any disposition to assume the characters of epithelial cancer.

*Ichthyosis linguæ* manifests itself in an overgrowth of the papillary and epithelial elements of the mucous membrane, and these become white and sodden from continued immersion in the fluids of the mouth. It is the dorsum of the tongue and the filiform papillæ which are affected in the majority of instances. Indeed, it would appear that some of the special features of the disease depend upon the peculiarly bold development of the papillæ in this situation, for it never seems to spread farther back than the line of the circumvallate papillæ. Occasionally the mucosa of the gums or of the cheeks is affected in a somewhat similar manner, but generally, as I have said, it is the dorsum of the tongue which is the original and the chief seat of the disease. Sometimes the papillæ, though enormously enlarged and overloaded with epithelium, retain their separate form; at other times they are welded together into masses, and it not unfrequently happens that the same tongue presents specimens of both the discrete and the concrete arrangement. In some cases the enlarged papillæ may be seen sprouting up in small groups, very suggestive of a commencing epithelioma; in others, on the contrary, the whole of the affected surface is smooth, hard, and almost cartilaginous. The ichthyotic coating presents a silvery or a snow-white appearance, quite different from any fur that ever covers the tongue as the result of its ordinary functional changes. When the disease has once manifested itself it is very persistent. Though it sometimes responds a little to treatment, and though it varies slightly according to the state of the patient's general health, it never wholly leaves a spot which it has once attacked, and it is never cured.

The essential nature of the disease appears to be that of a chronic inflammation, accompanied by an overgrowth of the papillæ and a loss of power to throw off the effete epithe-

lium. The irritation which gives rise to this inflammation sometimes acts on the periphery of the nerves ; sometimes it is situated between the periphery and the centre. In one of the cases about to be related (Case 4) the disease seemed to be due to inflammation of the inner ear, and the irritation was, no doubt, propagated along the *chorda tympani*. This is the only case I have to relate in which the irritation was remote from the affected surface. In four of the others it was peripheral. In one of these (Case 2) it was due to superficial syphilitic ulceration of wide extent and of long standing. In another (Case 7) the patient attributed it to smoking short pipes and taking the smoke into his mouth as hot as he could bear it. In a third (Case 1) smoking very strong cigars is given as the predisposing cause ; while in a fourth (Case 8) the patient assigned the practice of tongue-scraping, which he seemed to carry to excess, as the only cause he could suggest. In a case noted in the Appendix (Case 5) the disease is said to have commenced in a spot upon which a tobacco-pipe had often rested.

If these sources of irritation are to be taken as the starting-points of the disease, we must assume that the patients had a strong inborn tendency to the development of warty growths under slight causes.

It is worthy of notice that in two of the cases of which I am able to exhibit drawings (Cases 3 and 4) the symmetrical arrangement of the ichthyotic patches and their peculiar form suggests an association with the lingual (gustatory) branch of the fifth pair of nerves. In one of these cases (Case 3) the disease followed rheumatic fever ; the other (Case 4) is the case already alluded to in which the ichthyosis supervened upon inflammation of the inner ears. In the first of these two examples it is difficult to see any immediate connection with the fifth pair of nerves, but in the second a direct line of communication would be formed by the *chorda tympani*.

If a portion of the ichthyotic covering be examined under the microscope the appearances are very remarkable. The microscopical preparations upon which the following account

is founded were made from two specimens of the disease—the one a case under the care of Mr. Henry Morris, of the Middlesex Hospital, which I saw operated on in April, 1873 (Case 6 in the Appendix), and the other Case 2 in this paper. Both these examples had reached the point when ichthyosis becomes epithelioma, and both were for that reason submitted to operation. From the portions of the tongue removed in these two instances numerous sections were kindly made for me by Dr. Edward Sparks, and the appearances which they presented were marked by some differences of detail, especially with regard to the mode of invasion of the cancerous disease.

Where the section traversed only the ichthyotic coating the appearances were much the same in both cases. There was some increase in the thickness of the epithelial layer, though, perhaps, not so much as one might have anticipated. There was also some enlargement of the papillæ, and a great development of the rete mucosum. Around the bases of the papillæ and in the submucous and muscular tissues there was a very abundant nuclear cell-growth. There was also a notable increase in the number and size of the blood-vessels in all parts of the disease, in the non-cancerous as well as in the cancerous portions (Plate IV, fig. 1).

But where the indications of epithelial cancer were visible there were some differences between the two specimens. In the sections taken from Mr. Henry Morris's case the most striking feature was the remarkable development of the rete mucosum. It had increased enormously at the expense of the papillæ, reducing them, in many cases, to mere threads, and dipping down between them in the form of large club-shaped processes. Towards the termination of some of these processes the cells were assuming a circular arrangement, and forming the "laminated capsules," or nests of cells, that are so characteristic of epithelioma (Plate IV, fig. 2).

In the other specimen a few of these processes are visible, but they did not constitute the leading feature. For the most part the papillæ and their superficial structures, though enlarged and thickened, seemed to retain their original relation

to one another; but below them, in the submucous layer and among the muscular fibres, were numerous "laminated capsules" (Plate IV, fig. 3). Indeed, the number of these nests of cells which some sections presented was very remarkable. The club-shaped processes of the rete which were seen in this specimen were neither so numerous nor so largely developed as in Mr. Henry Morris's case. Perhaps these differences depend in some degree upon the age of the cancerous disease. The second case was operated on at a comparatively early date after the epithelioma had supervened. Or perhaps they may depend upon the precise point at which the cancerous disease commences, whether on the surface or in the deeper tissues.

I propose now to mention the particulars of a few cases, some of which have fallen under my own care, while others have been communicated to me by friends, or have been gleaned from various publications. In the Appendix I have noted, in a very abbreviated form, some other cases that have been obtained in like manner.

CASE 1.—The earliest example that I have met with is a case recorded by Dr. Ullmann in the 'Bavarian Medical Intelligencer,' 1858, under the title of "Formation of Callosities on the Tongue—Hypertrophy of the Epithelium of the Tongue—*Tylosis linguæ*." The author gives these names to a peculiar affection of the tongue, which he observed in an actor, aged 65 years. The disease had developed itself in twelve years without any assignable reason, unless the patient's habit of smoking very strong cigars could be considered a predisposing cause. There were on the surface of the tongue more or less intensely white plaques, between which the mucosa was of a dull colour, this tint blending towards the edges and tip with the normal appearance. In some places the patches were sharply defined. They could not be scraped off. They presented a hard consistence, and could only be cut away bit by bit with a knife. When this was done the papillæ looked red and increased in size, but under the thicker patches no papillæ

at all could be made out. On the front of the right half of the tongue these growths were most distinct, and surrounded an intensely red spot of the size of a kreuzer. On this spot there had previously been, according to the patient's statement, similar white growths, which had separated as a slough after a piece had been cut out. The border of this reddened spot was surrounded by a wall of from a quarter to half a line in height. After the removal of a few of the bits of white growth they always grew again. As the disease gave the patient no annoyance no active treatment was adopted.

CASE 2.—Henry W—, æt. 38, first applied at Charing Cross Hospital in October, 1871. He had formerly been in the army, but was then a sale-room porter. Fourteen years before, he had contracted syphilis in India, and had subsequently gone through the whole series of secondary symptoms. His tongue had been ulcerated for eleven years; at first the ulcerations were confined to the sides, these he neglected and they spread over the dorsum. When I saw him the upper surface was covered with a white, silvery coating, in some places rising into hard elevations like corns. Some small spots on the under surface of the tip were ulcerated and tender. He said the disease was always worse when he had been drinking or exceeding in any way. He was an habitual smoker, though smoking made his tongue smart, particularly where it was ulcerated. The *corns*, he said, marked the places where the ulceration had been most severe, and where caustic had been most freely applied by himself and by the surgeons who had seen him.

This patient has continued under my observation for two and a half years. He has been treated with anti-syphilitic remedies as well as with other medicines, and mild caustics have been applied to his tongue. But the treatment has produced no marked effect. He was a man who lived freely, and who took but little care of himself. Sometimes his tongue has appeared rather cleaner, because he was living

regularly and his general health was better. At other times it has been worse, because he has been drinking to excess and disordering his digestion.

Things went on thus till last autumn. On November 14th, 1873, he came to me and said that about eight or ten weeks previously he had noticed a lump in the left half of his tongue, and that there was now so much shooting pain—there having been before only some local soreness where it was ulcerated—that he thought it must have assumed a fresh character.

On examining it I found a hard lump, about as large as a hazel-nut, in the left half of the tongue. It was situated about the middle of the free portion. On its dorsal aspect there was an ulceration about the size of a split pea. The surrounding tissues were soft and felt healthy. The general ichthyotic characters of the rest of the tongue remained unchanged. The patient had a haggard look, and complained of a great deal of sharp pain under the jaw and shooting towards the ear and the vertex. The glands at the upper part of the neck, behind the angle of the jaw, were slightly enlarged on both sides, but most distinctly on the left side. Under these circumstances I recommended him to have the portion of tongue including the painful lump removed at once. He readily consented, and on the 22nd of November I took away, with the galvanic *écraseur*, about a third of the free portion of the tongue. He made an excellent recovery, and left the hospital on the 9th of December, the raw surface granulating healthily, and the patient being entirely relieved from the sharp shooting pain that had before caused him so much distress. It was from the portion of tongue removed in this case that some of the microscopical sections already described were made.

But the relief thus obtained was of short duration. Before two months had elapsed it was evident that the other half of the tongue was invaded by the cancerous disease. An ulcer formed on a spot on the dorsum where there had been a particularly thick patch of ichthyosis; the anterior part of the organ became swollen and hardened, and an enlarged



gland beneath the chin became very apparent and very painful. As the back of the tongue remained soft and natural, and as there were no other enlarged glands to speak of, I recommended a second operation. But the patient hesitated and begged for delay, and a fortnight later, when he was willing to give his consent, the disease had made so much progress that I could no longer recommend it. [He died April 27th, 1874.]

CASE 3.—William H—, a butler, æt. 46, living at Boston, in Lincolnshire. Married. Has six children; one (the first) died in infancy, the rest are all healthy. His wife has miscarried two or three times. He is a healthy looking man, and says that he has generally been very well. He never had syphilis, and his tongue was never sore before the present affection came on.

In 1861 he had rheumatic fever. It lasted four months, and when he was recovering the *ichthyosis Linguae* first showed itself.

On May 24th, 1872, he was sent to me by Dr. Mercer Adam, rather as a matter of pathological interest than with a view to any active treatment. The following is the note which I made at the time:—He has now a symmetrical patch of thick fur on each half of his tongue. It is of snowy whiteness, and not unlike the rough side of white kid leather (Plate V, fig. 1). Sometimes, he says, it is thicker, sometimes thinner; sometimes it comes off in small pieces, sometimes it is so firmly attached that it hurts him to scrape it. The adjacent portions of the tongue are perfectly clean, so that the contrast between the healthy and the diseased parts is very striking. The white patches are raised about an eighth of an inch from the surface. His teeth are bad, and he has lost many of them. He has not had toothache; but they become loose and drop out, or he pulls them out. He attributes their loss to "the hundreds of bottles of medicine" that he has taken for the cure of his tongue.

The morbid patches were strikingly symmetrical. They

looked as if a white butterfly with outstretched wings had settled upon his tongue. Their snowy, almost woolly, appearance suggested the idea that a vegetable parasite might be present. But on careful microscopical examination no trace of such a thing could be found. Though the patches looked snowy, they were hard to the touch, indeed almost cartilaginous and firmly adherent.

The patient says that at first there was only a small patch on the centre of his tongue, about the size of a fourpenny piece. This gradually increased for six years, at the end of which time it had reached its present size and shape. From that date until now it has remained stationary. Both common sensation and the sense of taste are much impaired, though not altogether destroyed, on the affected surface.

In the spring of 1873 Mr. Pilcher, of Boston, under the impression that the disease must be syphilitic, gave the patient iodide of potassium with one twelfth of a grain of the red iodide of mercury in each dose. This treatment had a very marked effect, and on December 5th, 1873, Dr. Mercer Adam kindly wrote me the following note:—"The patient's general health has improved, and most of the thick white deposit has disappeared from the tongue. A largish patch still remains on the left side, the size of a shilling, but otherwise the organ is free from it. On the surface, where the deposit formerly existed, there are visible, here and there, little milky looking spots, almost of an aphthous character, which may be incipient patches of ichthyosis."

[This patient attended the meeting, and was examined by the Fellows present.]

CASE 4.—William B—, æt. 63, formerly an auctioneer's foreman, but now an inmate of the Central Sick Asylum, at Highgate. To Dr. T. S. Dowse, the medical officer of that institution, I am indebted for opportunities of seeing the patient and making the following notes.

December 17th, 1873.—The patient is a hale old man, and says that he has generally had good health. When he was young he had gonorrhœa, but never syphilis, and on

questioning him closely no indications of a syphilitic taint can be discovered.

Two years ago he had "gatherings in his ears," accompanied by great pain and subsequent discharge, and his mind was slightly affected. It was then that his tongue first became diseased. At that time it was much more sore and painful than it is at present, for it was "quite raw," and there were some cracks upon it. These were occasionally touched with nitrate of silver. After that the white "skin" gradually came over it, and it has remained much the same ever since. It is always worse when his bowels are confined and when his digestion is at all deranged.

He still has obscure cerebral symptoms, numbness in the right arm, giddiness, pain in the head, as well as frequent discharges from his ears, especially from the left. When his ears are discharging he is free from pain in the head.

The whole of the dorsum of the tongue in its anterior part is covered with a thick white coating, wrinkled and corrugated. Towards the middle it slants off to the sides, so that the healthy mucosa comes forward, as it were, in a V shape (Plate V, fig. 2). The white appearance extends round the sides of the organ to the under surface, almost as far as the frænum, in milky white patches, and the same appearance is visible on the inside of both cheeks and of both lips. When the tongue was acutely sore his mouth was so tender that he could not take any salt, pepper, or mustard in his food. Now he can eat them all freely. Indeed, common sensation and taste are both blunted on the affected portion of his tongue. He has taken iodide of potassium and other medicines, but they have produced no alteration in the disease.

CASE 5.—The following case has been kindly communicated to me by Mr. Hancock.

Capt. D—, a spare man, æt. 53, had a small white warty excrescence, about the size of a split pea, upon the right side of the dorsum of his tongue. It had a hardened base rather

larger than itself. It gave the patient no pain; in fact, he was not aware of its existence till it was discovered by his ordinary medical man, when attending him for some trifling illness. The glands in the neighbourhood were not implicated. Mr. Hancock therefore removed the disease by a V-shaped incision. The patient did very well at the time, but seven years afterwards another growth of the same character appeared close to the cicatrix. The disease still being localised, Mr. Hancock again operated. On this occasion he removed a semilunar piece of the tongue, carrying the cut well beyond the hardened base. The patient lived five years after the second operation, and died of pneumonia. There was no appearance of any return of the tongue disease.

CASE 6.—For the notes of this case I am indebted to Mr. James Adams, of the London Hospital.

Davison P—, æt. 39, first came under observation in April, 1872, with a large patch of ichthyosis on the right half of his tongue. He said that he had first noticed a small pimple under the right side of his tongue twenty-one months before. This gradually spread. It gave him no pain except during mastication and when smoking. He has never had syphilis.

The white patch appeared to consist of hypertrophied papillæ, covered and surrounded by very thick epithelium. The subjacent muscular tissue was perfectly soft and flaccid, while the thick covering felt like leather that had been soaked in water and then dried.

Iodide of potassium was ordered for some time, and subsequently arsenic, but the tongue manifested no improvement. At the end of twelve months the patch had increased in size and thickness, and looked as if it was about to ulcerate.

Unfortunately this patient has not been seen since.

CASE 7.—Dr. J. Moore Neligan has related a most interesting case in the 'Dublin Quarterly Journal of

Medical Science' for August, 1862. The following is an abbreviated account of it :—

H. E—, æt. 46, appeared before Dr. Neligan, on the 17th of April, 1857, to be examined for life assurance. In his paper he stated that he had never had any illness since childhood, and that he never had occasion to consult a medical man. His family history was good, and his own health seemed to be excellent. But his tongue was singularly affected. "The natural membrane covering it and the inside of the cheeks being changed into a thick white skin, like a kid glove." He said that it had been so for the last thirty years, that his taste was as perfect as that of any other person, and that he had no soreness or uncomfortable feeling in it.

The tongue was perfectly clean—that is to say, there was no fur upon it, nothing that could be removed by scraping or washing. It was of a dead white colour, resembling, perhaps, rather the tongue of a boiled calf's head than a kid-skin glove, the lustre of which it wanted. It was uneven on the surface, but not wrinkled or fissured, nor did it present the papillated character of the organ in its normal state. There was more a general unevenness. The same condition existed in the mucous membrane lining the cheeks and the gums in contact with them, but the covering was evidently less thick. The roof of the mouth, the palate, the throat, the tonsils and the uvula, were quite natural in appearance. On closely questioning the patient he stated that he had noticed this change when he was about eighteen or nineteen years of age, and that then it was just as complete as when he was first seen by Dr. Neligan. He thought when he first discovered it that it must have been caused by smoking to excess, and by a habit he had of always smoking the tobacco in the shortest possible pipe, so as to get the smoke into his mouth as hot as he was able to bear it.

This gentleman was seen by Dr. Neligan from time to time up to the 3rd of June, 1861, and the most careful examination failed to detect the slightest alteration in the state of the tongue.

About the end of September, 1861, the patient accidentally bit his tongue. The result was that a small tubercle, about the size of a pea, formed on the edge, beneath the mucous membrane, its situation being on a level with the molar teeth. This gradually assumed a cancerous character. The glands in the neck became affected, and the patient died in a few months.

In this case we notice particularly that the disease came on at a comparatively early age, and lasted over thirty years, when a very slight cause determined the commencement of epithelial cancer.

As another example of the disease commencing early and continuing through many years, I may mention a case which I was asked to see in March, 1873, by Mr. Francis Fuller, of the St. Marylebone Infirmary.

CASE 8.—John H—, æt. 68, was an in-door servant till about five years ago, when he caught a violent cold. This was followed by rheumatism and chronic bronchitis, on account of which he was admitted into the Infirmary.

He says that he has always been troubled with indigestion. Forty-five years ago he used to have a foul tongue, which he was in the habit of scraping with a tongue-scraper. He cannot tell when the leathery coating which now overspreads his tongue first appeared. He believes it has existed ever since he was twenty-one, but during the last fifteen or sixteen years it has been getting worse. When he was young he had gonorrhœa, but he never had any symptoms of syphilis.

When I first saw him (March 28th, 1873) the dorsum of the tongue was entirely covered by a thick, white, persistent fur. It was wrinkled and chipped, so that it had the appearance of being divided into scales. Two months before, in consequence of strong applications which were made to the tongue at a special hospital, a patch of the fur came off and left a bare spot, about the size of a sixpence, half an inch from the tip. This spot was red and raw, and so sensitive and tender that he could not take any mustard, pepper, or

vinegar with his food. Near the tip the white appearance turned round the edges of the tongue towards the under surface. At this date I noticed no induration in or around the raw spot.

On May 26th, 1873, the following note was made :—The raw spot has grown up, forming a tumour about the size of a bean, and in front of this is a little ulcerated pit. The anterior part of the tongue seems altogether swelled, and there is a constant flow of saliva from the mouth. The ichthyotic coating is very thick towards the back, behind the ulcerated spot, and of a yellowish colour. The lump and the ulcerated spot are both hard, and the induration extends to a considerable area around. The submaxillary glands on both sides are somewhat enlarged. The patient complains of pain under the jaws and towards the ears and the vertex.

As it was evident that the disease had now become epitheliomatous, I proposed to remove the whole of the anterior part of the tongue, but the patient was unwilling to submit to any operation.

On July 3rd he came to me again. The hard lump was then sloughing in its centre, and it was very sore when touched. He now complained of pain down the neck and up the side of the head. The submaxillary glands were enlarged, but not the lymph-glands. The operation was again urged upon him, but in vain.

Soon after this the patient took his discharge from the Infirmary, and went for advice to several hospitals—at length being admitted into the Middlesex on August 5th, under the care of Mr. Hulke. By this time it was judged too late to perform any operation. [He died March 14th, 1874.]

CASE 9.—In a case related by Dr. Church, in the first volume of the 'St. Bartholomew's Hospital Reports' (1865), an ichthyotic condition of the tongue was associated with patches of the same nature in other parts of the body. The patient was a delicate girl, aged 15; and the disease, which was congenital, was vaguely attributed by the mother to a fright she had had during her pregnancy.

The following is an abbreviated account of the case :—The affection of the skin was confined to the left half of the body, scarcely crossing the middle line at any point. The disease presented two distinct characters, being in some places papilliform, in others squamous. The skin on the left side of the trunk was everywhere of a darker hue than that on the right, a well-defined line being visible down the centre of the thorax and abdomen.

A large patch covered the left side of the forehead and nose, the affected skin being slightly papillary in character. A patch similar in appearance spread over the greater part of the cheek and chin on the same side, and extended from the face to the tip of the ear.

The whole of the left side of the neck was occupied by the disease, which here assumed a warty character, some of the papilliform outgrowths being pedunculated. The diseased portions of skin stopped abruptly, both before and behind, at the middle line of the neck.

The scapular region was almost entirely occupied by a large patch of a steel-grey colour, very slightly elevated above the surrounding skin, and consisting of small polygonal scales. The skin, so altered, felt quite smooth and soft to the touch, could be easily pinched up between the fingers, and nowhere exhibited traces of the cracks and fissures usually described as present in ichthyosis. The greater part of the left half of the chest was affected in a similar manner, the areola of the nipple being the seat of long conical papillæ of a browner colour than the surrounding squamous portions. At the border of the axilla, and in the axilla itself, the papillæ were larger and darker than in any other part of the body. Smaller patches, similar in every respect to that on the chest, existed on the subscapular and lumbar regions, a very small one at the commencement of the anal fissure, and another larger one on the buttock. Nowhere, not even in the neck and axilla, where the papilliform masses were largest, was the integument stiff or rigid, while the non-elevated squamous portions were quite remarkable for their softness.



A similar change had taken place in the mucous membrane of the mouth, whilst that of the eyes, nose, and vagina was unaffected. The whole of the mucous membrane covering the inside of the left cheek, and the left half of the soft palate and tongue was the seat of papilliform outgrowths, which closely resembled those on the neck and in the axilla, but contained no pigment, and were of a dull yellowish-white colour.

This patient died suddenly, and at the *post-mortem* examination it was found that the heart was greatly hypertrophied, that the foramen ovale was slightly open, and that the aorta immediately below the origin of the left subclavian artery became suddenly narrowed.

The fact that both the cutaneous and the mucous surfaces were affected, and that the morbid condition was limited to one half of the body, are the points which are the most remarkable in this case as bearing upon our present subject. As this case was of congenital origin, it ought clearly to be placed in a separate category from the examples of *ichthyosis linguæ* that have been already described.

In studying these detailed cases, as well as in looking at the Appendix, there are several points which strike us as worthy of special notice.

1st. The great preponderance of cases in which *ichthyosis linguæ* affects men. If we exclude Dr. Church's case, which seems to belong to a separate category, there is only one female patient in a list of sixteen cases. It would appear, therefore, that the disease which is properly the subject of this paper—a morbid condition which supervenes upon a previously healthy mucous membrane, and which has a strong tendency to become epitheliomatous—is almost entirely confined to men.

2nd. *Ichthyosis linguæ* is, in its commencement, a disease of early manhood and middle age. It never occurs before puberty. I have, however, seen a case which formed an apparent exception to this rule, and which it may be worth while to mention.

A little girl, æt. 3, had on her tongue several sharply defined, snow-white, elevated patches, which presented all the appearances of ichthyosis. But after a time they lost their sharp edges and white surface, and were overspread by a foul yellowish secretion. It was evident then that they were merely mucous tubercles; and under appropriate treatment they got well.

3rd. We notice that *ichthyosis linguæ* is occasionally associated with syphilis. This naturally leads us to ask, Is it always syphilitic? Is it merely one of the many manifestations of that Hydra-headed monster? Is it a form of disease claiming the same origin as the mucous tubercle, and more analogous to it than to any of the other diseases that have been named in the earlier part of this paper? To this I reply that, though it is sometimes due to superficial syphilitic ulceration (as in Case 2), this is only one among various causes that are capable of producing it. In many instances no syphilitic evidence whatever can be obtained. In none, as far as I know, has any complete or permanent amendment been brought about by anti-syphilitic remedies, no matter how early they were employed, or how slight was the case. Again, the disease has a strong tendency to become epitheliomatous, and will assuredly, if the patient live long enough, develop into epithelial cancer. But such is not the history of ordinary syphilitic sores or growths. For these reasons it appears to me that we are not warranted in saying that the disease is one of syphilitic origin. On the contrary, it is clearly distinguished from the manifestations of syphilis; though, as we have seen, a venereal ulceration may be its starting point. In persons of a peculiar idiosyncrasy it appears as if any oft-repeated or long-continued irritation of the lingual branches of the fifth pair of nerves were capable of exciting the disease.

With regard to treatment we observe that the most active medicines have been given—mercury, arsenic, iodide of potassium, &c.—but they have failed to effect a cure. The most powerful caustics have been employed, and yet they have not removed the disease. I have a strong opinion that

the best we can do for these patients is to study their general health, and that if any local measures are used they should be of an unirritating kind. When a case presents itself in an early stage with the ichthyotic patch no larger (let us say) than a fourpenny piece, my advice is to excise it freely and at once. The result which Mr. Hancock obtained by following this course is very encouraging (Case 5). Again, when the disease is evidently becoming epitheliomatous, no time should be lost in undertaking an operation; for though the results of such operations are not satisfactory as regards an ultimate cure, there can be no doubt that they both prolong the patient's life and render his existence more tolerable. But between the early and the late stage of the disease I hold that the less the tongue is meddled with the better. I am opposed to all caustic applications as well as to all cuttings, parings, and scrapings. If there are any teeth which seem likely to injure the tongue they ought to be extracted. At the same time the patient should be careful about his diet, avoiding everything that makes his tongue smart; and above all he should pay proper attention to his digestion. It is in this direction that the surgeon can be of most use during the middle period of the disease, by giving such advice as will guard the tongue against all sources of irritation, and will regulate and improve the general health. I have often been struck by the way in which the ichthyotic coating becomes altered for the better under the careful regulation of the stomach and bowels, though it never quite disappears. In cases such as these our duty is to reduce the evil to a minimum if we cannot altogether remove it.

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## APPENDIX.

CASE 1.—Mr Hulke reports a case in the 'Clinical Society's Transactions,' vol. ii, p. 1. The patient was a man, æt. 43. He was first seen in February, 1861. There

had been ichthyotic patches on his tongue for twelve or fourteen years. He never had syphilis. A small patch was cut off, and free bleeding followed. In April, 1864, a larger piece was removed with the *écraseur*; and in May of the same year another patch was cut off with the scalpel. In December, 1867, he had a ragged ulcer, with raised margin and thickened base, near the tip of the tongue. The tumour was removed with the *écraseur*. In the following June he was last seen, and was then evidently near his end.

CASE 2.—This case as well as No. 3 have been kindly communicated to the writer by Mr. Hulke.

A printer, *æt.* 42, was admitted into the Middlesex Hospital on August 12th, 1870. Scattered over the upper surface of his tongue were several leathery plaques of thickened epithelium of very old standing; and in the left side was a puckered excavated ulcer, the edges and base of which were indurated. Below and behind the body and the angle of the lower jaw, on the left side, were two large nodular masses, red, prominent, and fluctuating, one of them being superficially ulcerated. The tongue was fixed by extension of the infiltration from around the ulcer into the floor of the mouth. He said that the ulcer began about nine months before as a small hard crack, which he attributed to having bitten his tongue. Towards the end of August the cluster of enlarged glands under the body of the jaw broke, and soon became a deep, hollow, sloughy ulcer, with undermined and everted edges. From this time he rapidly sank, and died on October 10th.

CASE. 3.—A bronzed-face, hale-looking farm-labourer, *æt.* 50, was admitted into the Middlesex Hospital on August 19th, 1871, with a deep, narrow ulcer in the left half of his tongue, grooving it from the tip nearly to the base. On both sides of the tongue were several opaque plaques of a whitish or buff colour, manifestly restricted to the surface, unsurrounded by any hardness, the tissues immediately limiting them appearing perfectly healthy. They had ex-

isted, the patient said, very many, he did not know how many, years. He first noticed the ulcer in the preceding May.

CASE 4.—Sir James Paget has reported the following case in the 'Clinical Society's Transactions,' vol. iii, p. 88 :—The patient was a lady, æt. 42, and was first seen in August, 1869, on account of patches of ichthyosis on the right side of her tongue. They had been increasing for twelve months. They occupied only the papillary structures, and had no indication of cancer in or near them. In December, 1869, thickening and hardening were first observed in and beneath the ichthyotic patches, and in another month the whole side of the tongue was occupied by well-marked ulcerated epithelial cancer. In this patient there was an hereditary tendency to cancer.

CASE 5.—In St. Bartholomew's Hospital Museum ('Cat.,' vol. i, Ap. 4) there is a tongue in which the anterior three fourths of the dorsum are occupied by a circular ulcer, with a broken and shreddy surface. The margin of the ulcer is nearly surrounded by a hard layer of opaque white epithelium, which is in parts a line in thickness. Around this layer the tongue appears healthy. The patient was a man, aged 68; the disease commenced eight years before death in a small, hard, white lump in the middle of the dorsum of the tongue, on a spot upon which the end of a tobacco-pipe had often rested. The patient was for several years in the habit of paring this lump with a razor twice a week. It enlarged and extended all over that part of the tongue now occupied by the ulcer, but it gave him no inconvenience except from its hardness. About four months before death ulceration commenced, and extended over nearly all that part of the tongue that had been covered by thickened epithelium. The organ at the same time became very large, completely preventing deglutition, and the patient died exhausted.

For notes of the three following cases I am indebted to Mr. Henry Morris,

CASE 6.—Edwin T—, æt. 50, applied at the Middlesex Hospital on December 27th, 1872. He had had syphilis seventeen years before, but his tongue had never been sore previous to the commencement of the present disease. He has been a great smoker.

For the last nine or ten years the greater part of the dorsum of his tongue has been overspread by a white, leathery coating, arranged in a somewhat symmetrical manner on each lateral half of the organ. Upon the left side of the tip was a raised irregular mass, about the size of an almond, quite hard, and fissured on its surface. There was no enlargement of the lymph-glands. For four or five weeks anti-syphilitic remedies were prescribed, but without effect. Subsequently a small, hard nodule appeared on the right side of the tip, and an enlarged gland was noticed at the left angle of the jaw. There was also more pain than before.

On April 3rd, 1873, the anterior half of the tongue was removed with the galvanic *écraseur*, and the patient made a good recovery.

CASE 7.—William C—, æt. 49, was admitted into the Middlesex Hospital, under the care of Mr. De Morgan, in April, 1873. He never had syphilis. For the last ten or eleven years there had been a white, horny patch upon the left side of the dorsum of the tongue. Nine months before admission this spot began to ulcerate, and was now occupied by a superficial ulcer. There were no enlarged glands in the neck. On the lining membrane of the cheeks there were some white patches.

On April 23rd Mr. De Morgan sliced off the superficial ulcer with scissors, and the patient left the hospital on May 27th.

In August he was readmitted, with a hard nodule just behind the cicatrix, and pain extending towards the ear.

On September 3rd, 1873, the right lingual artery was tied by Mr. Morris, and then the diseased structures were

freely removed with the knife. The patient was discharged, well, on September 23rd.

CASE 8.—Samuel B—, æt. 56, applied at the Middlesex Hospital on May 1st, 1873. He never had syphilis. For at least ten years he has had tough white patches on his tongue. Eight months ago a small elevated ulcer commenced on the right side, near the tip. When first seen, there was a ragged ulcer extending from the tip nearly to the base of the left side of the tongue. On the right side there was an ichthyotic patch, which extended towards the under surface. There was one enlarged gland beneath the angle of the left jaw. The patient refused to undergo any operation.

These three cases are reported in full in the 'British Medical Journal' for February 21st, 1874.

## DESCRIPTION OF PLATES IV AND V.

### PLATE IV.

FIG. 1.—Ichthyosis linguæ.  $\times 40$ . Showing the thickening of the epithelial layer, the development of the rete mucosum, and the great increase in the number and size of the blood-vessels (see page 159).

FIG. 2.—Ichthyosis linguæ, with epithelioma.  $\times 40$ . (H. Morris's case.) Showing the club-shaped processes of the rete, which has developed at the expense of the papillæ (see page 159).

FIG. 3 (see page 160).—*a*. Tip of left-hand papilla.  $\times 200$ . Showing the great thickness of the rete and of the epithelial layer.

*b*. Ichthyosis, with epithelioma.  $\times 40$ . Showing the nested cells in the submucous tissues, but no processes of the rete.

*c*. The central nest of cells.  $\times 200$ .

### PLATE V.

#### Ichthyosis Linguæ.

FIG. 1.—Case 3. William H— (see page 163).

FIG. 2.—Case 4. William B— (see page 165).



Fig. 1.

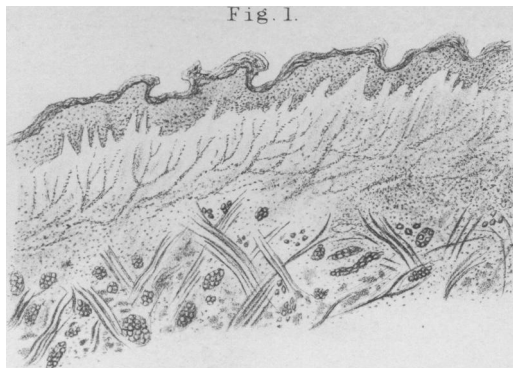


Fig. 2.

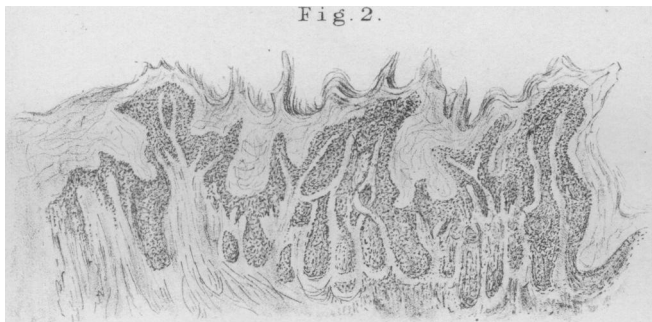
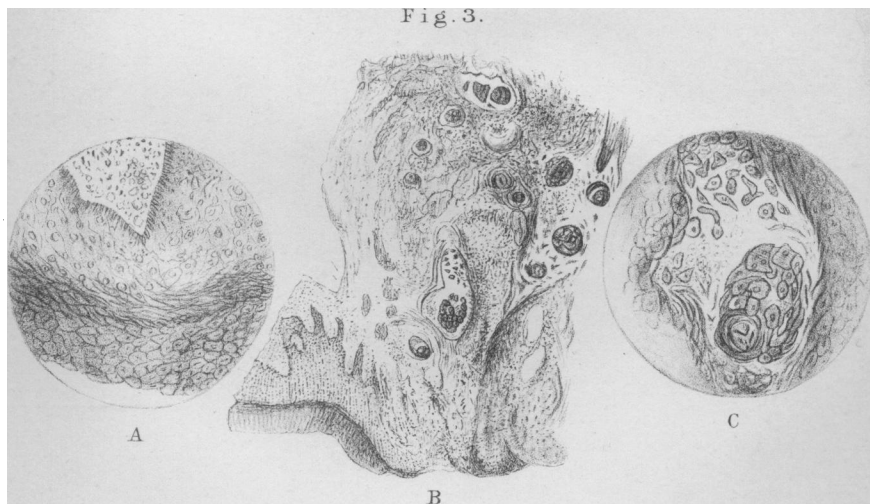
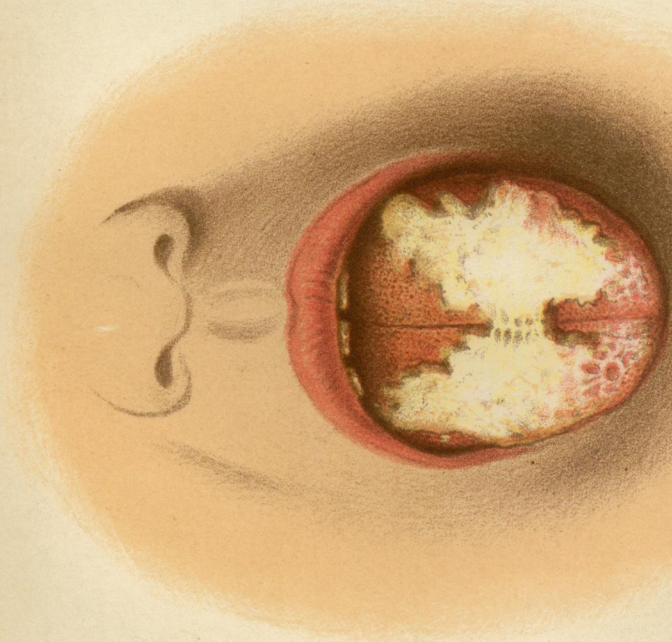
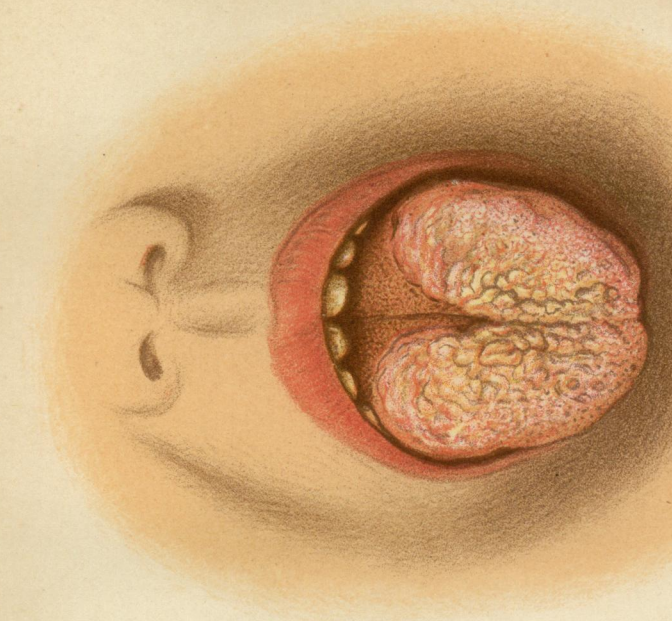


Fig. 3.





E. Burgess del. G. H. Ford lith.



$\frac{3}{4}$  diameter

Montern Bros. imp.