Epithelioma of the Lips.

I have chosen the subject of "Epithelioma of the Lips" from having had special opportunities of studying the disease, while working in the Royal Infirmary of Edinburgh, first as clerk and afterwards as house-surgeon in Wards 1, 7, 8, & 9.

During that period I had the opportunity of seeing a number of cases and of watching their progress under surgical treatment.

I shall consider the disease as it appears in the lower lip because of the rarity with which it attacks the upper. Its rarity in the upper lip is well shown by the fact that Sir Astley Cooper saw only one case in a series of two hundred; and further, on perusal of the "Lancet" for some years back, I find only one case reported.
I shall consider the disease as regards the Anatomy, Pathology, Causation, Growth, Diagnosis, Prognosis + Treatment.

"Anatomy"

The lips consist of two fleshy folds formed of skin, mucous membrane, areolar tissue, fat, orbicularis oris muscle, coronary vessels, nerves, lymphatic vessels + labial glands.

The Coronary arteries are of some importance.

The Superior, because it passes close to the angle of the mouth + is therefore cut when the angle of the mouth is removed.

The Inferior, because it is cut in the operation for excision of the lower lip, as it passes along the edge of it.

The other arteries liable to be cut are - inferior labial, submental + mental branch of inferior dental.
The Lymphatics are the most important structures in connection with this disease, as it is through the vessels that the disease spreads to distant parts, and in the glands in the neck that the disease so often recurs after removal.

This is well shown in the case of a case operated on by Prof. Spence, which stands in the sideroom of Ward xill Edinburgh Royal Infirmary. This case depicts the linear scar of the operation on the lip, in which there was no return, and a large mass of ulcerating epitheliomatous glands in the neck.

From the diagram, which is a copy of the one in Gray's Anatomy, it will be seen, that some of the lymphatic vessels run more or less straight down from the lip to the glands in the submaxillary triangle of the neck, while others run along the upper margin of the lower lip, join those coming from the upper
pass downwards and outwards across the body of the lower jaw to the submaxillary glands.

From the submaxillary glands vessels run to the other superficial glands in the neck.

The vessels from the mucous membrane of the mouth empty themselves into vessels accompanying the branches of the internal maxillary artery and join the deep parotid and deep cervical glands.

"Pathology"

In the early stages of the disease the naked eye appearances present wide differences. Thus the disease may have the appearance of a small warty excrescence, a simple crack with a hard base or a small abrasion of the mucous membrane with the characteristic hardness round.

In the later stages, the disease does not present such wide differences, but has the appearance
of an ulcer with hard edges and a hard irregular surface with a yellow purulent foul smelling discharge.

Under the microscope, a longitudinal section shows ordinary squamous epithelium sending processes into the surrounding tissues, a transverse section shows a series of nests, consisting of a centre of broken down squamous epithelium and a periphery of somewhat flattened epithelial cells, in a connective tissue matrix.

"Causation"

Patients suffering from the disease usually have long-lived healthy parents. Thus of the cases in the Edinburgh Royal Infirmary the ages of the parents varied from 70 to 84 with a few exceptions. Prof. Spence in his "Lectures on Surgery" says that the exciting cause is often traceable
to long continued local irritation as: - smoking a short pipe, irregular teeth &c.

This is borne out by the cases under observation, inasmuch as with one exception they were all smokers & carried their pipes on the side on which the disease was situated, till compelled by the pain to either give up smoking or carry their pipes on the opposite side. The disease also attacks the poor rather than the rich, the poor smoking stronger tobacco & pipes usually much too short in the stem. It is more prevalent in the country than in the town the open air making the pipes hotter & the irritation greater.

Then again the women it attacks are nearly always addicted to the use of tobacco.

Roux held the opinion that tobacco smoking was a common cause but he on the other hand
noticed the remarkable fact that all his patients came from a district where smoking was almost unpractised.

In cases where smoking is not the cause there is usually some other form of irritation discoverable such as a sharp tooth. In other cases no cause can be traced, on which account some writers have brought forward the theory, that it is due to an error in development. A portion of epidermis becoming invaginated gets left behind + remains in abeyance till after middle life, when the wasting of the connective tissue allows it to spring into active growth & form a tumour.

A case of this kind is recorded by Mr. R. Clement Lucas — an enginedriver, aged 47, who neither smoked nor chewed tobacco, six years before admission to Guy's Hospital took a severe cold + a
sore then appeared on his lower lip, which refused to heal. Three years later he was struck on the lip by a lever of his engine, and received the blow, which knocked out a lower incisor, just on the sore. This made the lip more painful, the superficial layer of skin and mucous membrane peeled off. About a year after this the lip became more painful; he found the sore extending. He then consulted his medical man, who treated him with caustic for fifteen months; then sent him to a Metropolitan hospital, where he was operated on twice. The disease however recurred in the glands on both sides of his neck. They refused to operate on him again; so he went to Guy's Hospital and was operated on successfully by Mr. Lucas.

The reason why the disease is one of advanced life, is probably according to Payne, because the
wasting of connective tissue in older individuals, by opposing less resistance to the growth of epithelium favours the growth of this form of cancer.

"Growth"

There is apparently a good deal of doubt as to where the disease actually begins.

Payne states that it is very difficult to say in some cases whether the origin of the growth was from the epidermis or from the skin glands, especially the sebaceous glands, which, embryologically, are derived from an involution of the epidermis, or again from the sheaths of the hairs.

Holmes & Hulke in their "System of Surgery" say that the primary seat is in or under the skin or mucous membrane most frequently at or near the junction of the skin & mucous membrane.

Mr. Travers on the other hand
states that it begins in the cellular tissue between the skin and mucous membrane.

The difficulty of investigating this point is very great owing to the rarity with which one gets a case to examine in the earlier stages, so that one cannot say with certainty where it begins.

The disease varies considerably in the way in which it makes its first appearance. Among the cases under observation some began as a small crack hard at the edges, others as a small pimple which was continually being picked off and always grew again; others again as a small ulcer. In almost all these cases it made its first appearance in the mucous membrane close to its junction with the skin. In all the articles on the subject a similar mode of commencement is to be found.

The growth at first causes inconvenience rather than pain, but as it goes on growing the pain increases and it is that, as a rule,
which induces the patient to seek relief; or else the ulcer spreading & becoming harder, the pimple breaking down & scabbing & breaking down again, the fissure widening & getting deeper & deeper, makes the patient take a more serious view of his condition.

The rapidity of growth seems to depend somewhat on the age of the patient, being more rapid in younger men. The oldest man who came to Ward 15 suffering from the disease was ninety-five years old, his growth was removed & he came back two years later with no return of the disease either in the lip or elsewhere. This seems to be an almost unique case as the oldest patient suffering from the disease, Mr Bryant mentions as having been under his care was a sweep aged eighty-six. Of the cases under observation besides the one already mentioned, four were above seventy, a woman of eighty-two & three men, all the rest occurred...
in men between forty & seventy. Of twenty consecutive cases operated on by Erichsen thirteen were above sixty, six between fifty & sixty & one below thirty. The majority of writers have found the disease to be most common between forty & seventy.

The length of time the disease may last before beginning to spread varies greatly in different cases. Thus a shoe-maker aged 75 was treated in Ward 1 whose disease had a history of twenty-four years growth. The notes of his case are as follows: - Twenty-four years before admission he noticed a small pimple about the size of a pin's head on the left side of his lower lip which he was continually picking off but which always returned. Owing to the annoyance & inconvenience it caused him, he consulted a surgeon, some fifteen or sixteen years after it began, who snipped it off with a pair of scissors & gave him some ointment to apply. This afforded him only temporary relief.
+ it still continued to bother him having by this time become a small ulcer. Three years before admission he consulted one of the surgeons of the hospital, who ordered him a yellow powder to dust on, an operation not being considered necessary at that time. Six months later as there was no improvement he went to Dr Allan Jamieson, who also prescribed a yellow powder. After this it began to grow more rapidly six months before admission became painful so as the pain did not improve he returned to hospital and was admitted. On admission he had a hard warty growth about the size of a sixpence on the left side of the lower lip, but no enlarged glands could be made out.

Mr Bryant mentions the case of a man whose growth had lasted twenty years as being the longest under his care. A case of six year growth has been already mentioned as recorded by Mr Lucas. Of the cases in the Royal Infirmary with the exception of the case recorded above
they had periods of growth varying from nine months to nine years.

The disease spreads locally invading and destroying the surrounding tissues. It not infrequently spreads to the lower jaw and after removal may recur in the jaw. This occurred in the case of a labourer, aged 57, who was admitted to the Royal Infirmary in August 1893 suffering from an epithelioma of the lip which was excised, he returned to hospital a year later with a recurrence of the disease in the lip but no affection of the glands; it was then found necessary to remove both angles of the mouth with the lip. Eight months later he again came back with a small hard tumour, which on microscopic examination proved to be an epithelioma, growing from the outer table of the body of the lower jaw, though there was no return in the lip. The tumour was removed with the piece of jaw from which it was growing. Six months after there
was no return. This case is also of interest inasmuch as, although the whole lower lip with the angles of the mouth had been removed, yet the disfigurement was so slight that, before he was shaved, anyone would pass him in the street without seeing anything the matter with him.

Prof. Spence gives an admirable description of the spread of the disease when he says that: - The disease varies as to the extent and direction in which it spreads, thus it is sometimes confined to a small space of the probatal surface, but the hardness involves the textures towards the skin or angle of the mouth, sometimes it extends superficially along the length of the probalum, or the surface, some depth of texture may be affected while the skin and mucous membrane of the body of the lip are unaffected.

Prof. Miller in his lectures gives a very similar description of the spread of the disease.

It also spreads by the lymphatic
vessels to the glands in the neck may recur in these glands after removal.

“Diagnosis”

In a typical advanced case this is comparatively easy, the only affection for which it can be mistaken being chancre. In distinguishing one from the other, the age & sex of the patient & the history of the disease are of importance. Chancre is an affection of youth rather than of old age, though old men are not infrequently the subjects of chancre. Young men occasionally suffer from epithelioma; it also occurs much more frequently in women than in men, whereas epithelioma is rare in women; again chancre has not made its appearance more than six or eight weeks before the submaxillary glands become enlarged whereas epithelioma has lasted some months before there is any glandular enlargement. In chancre if untreated secondary symptoms soon occur, if treated rapid improvement takes
place as a rule. Epithelioma varies greatly in its mode of commencement, growth & appearance, while the characteristics of chancre are almost always the same.

It is most important that the disease should be diagnosed early, as on this largely depends the success of operation. Unfortunately, it is sometimes difficult to say whether an ulcer is simple or malignant, though the malignant forms always have a hard base. The microscope is of great service in clearing the matter up, a small portion of the growth can be easily removed with the scissors & examined, when its true nature will be seen.

There is one other condition, which resembles the disease but is however confined to the Maoris, due to unskilful & injudicious tattooing. It produces a hard elevated slightly bluish patch in the lip, which has been mistaken for the disease.
Epithelioma, however, is extremely rare if not altogether unknown amongst those natives.

"Prognosis"

Opinions vary very much in this respect.

Thus Holmes and Hulke say that under the most favourable circumstances one can only expect relief for a time because sooner or later the disease returns in the scar or submascillary glands.

Erischen gives an almost opposite opinion as his experience says: "When completely removed it does not, I believe, very commonly recur."

Paget calculates the average period of return to be four years. He admits, however, that the disease, when located in the lip, does not re-appear till after a longer interval, in many cases having been arrested for several years and in some few cases has not recurred.

In Druitt's Surgeons' Vade-mecum
it is stated that the prognosis is more favourable than in epithelioma of any other mucous surface, especially in cases of slow growth excised freely before glands have become affected.

Watson-Cheyne says: "The least favourable of the face cancers is that of the lip, no doubt because the muscle is soon attacked, but even here the results strongly support the view of the curability of the disease. Thus Womer brings forward a large number of cases - 277 operations - which had occurred in Von Bruns clinique during a period of 41 years. Of these, 106, or 38.2%, remained well for more than 3 years, and in 54, which also remained well, the 3 year limit had not yet been reached. The recurrences were 36%. Twenty-one of the patients had remained well for periods varying from 10-40 years. Maiweg gives the results at Bonn of 182 patients, 81 of these 81 had remained free from recurrence for from 3-18 years, giving the percentage of cases at 44;
in 49 of these cases more than 6 years had elapsed, and in addition to this number 44 were free from recurrence who had not reached the three year limit. It is also an encouraging point with regard to these cases that in several of those ultimately cured one or more operations for recurrence had been carried out soon after the first. Thus in 81 cases of Maiwegs 9 had had recurrences, one of them thrice, one twice and the rest once. Taking the results of a large number of surgeons together—namely Thiersch, Billroth, von Bergmann, von Liniwarter, Fischer, Koch, Bartisch and Brunns—the proportion of cases of cancer well 3 years after operation is 28.1%.

With this evidence before us, we see that the prognosis is very good in early slow-growing tumours, and is not as bad as one might suppose in the more advanced cases.
"Treatment"

It is now well recognised that caustics are not only useless and painful but actually aggravate the disease. Prof. Spence recognised this, saying that escharotics are useless + painful.

In the Text Book of Surgery by American Authors it states that caustics help the disease.

In the case quoted above, recorded by Mr. R. Clement-Lucas, caustics were tried for fifteen months without any improvement, in fact the glands became enlarged on both sides of the neck.

Also in the case of a cabinet-maker, aged 47, who was admitted to the Royal Infirmary suffering from the disease, escharotics had been tried for some time, & apparently caused an increase in the rapidity of growth, the patient himself stating they made him much worse.

Caustic treatment being, if not
harmful if used to any extent, at any rate useless, we are driven to the use of the knife.

Various operations have been devised for the removal of the disease.

Among the first was the V-shaped incision cutting wide of the disease and then approximating the cut surfaces by means of silver wire sutures, this method left very little scar but is now discarded by the majority of surgeons owing to the frequency with which recurrence took place in the scar or glands.

The semilunar incision for the removal of the disease when it affects the proboscis has also been discarded for the same reason.

The incision now most generally used is the rectangular one devised by Chopart, the upper margin is formed by the free edge of the lip, the lower by an incision parallel with this across the chin and the two laterals by vertical lines
dropped down over & below the jaw, a flap is dissected up from the neck to form the new lip. If the angle of the mouth is involved, he removes it by cutting out a triangular piece the base of which is formed partly by the angle of the mouth & partly by the corresponding vertical incision as shown in the diagram; the object to this incision is, that the lymphatic vessels passing from the angle of the mouth to the glands in the submasillary triangle are cut close to the disease. It would be better to carry our incision vertically downwards from the apex of the triangle instead of inclining it towards the middle line thus avoiding cutting the lymphatics so close.

Many methods have been devised for restoring the lower lip beside the one mentioned above.

Thus Langenbeck prolongs the lower horizontal margin of the gap by incisions which pass round the
angles of the mouth into the upper lip, always leaving, however, a pretty wide piece in the centre of the upper lip, because of the danger of cutting the communications between the coronary vessels & the arteries of the septum. The portions of lip thus marked out are mobilised & drawn together towards the middle line & there united by sutures. Sutures are also placed at the new angles of the mouth to keep the normal outline, & the rest of the wound closed.

This is not adapted for cases in which more than the moveable portion of the lower lip has been removed.

It was a method somewhat similar to this that one of the surgeons of the hospital used in the case of a woman with Epithelioma of the lip, but he transfigured the upper lip & cut a flap out of it, which he twisted into the gap & stitched in position with an excellent result.
Brun cuts vertical flaps from the cheeks & turns them round & stitches them into position.

Other surgeons instead of prolonging the vertical incisions prolong the transverse & dissect up a flap from each cheek, then draw the two together & stitch them into position. The flaps must be dissected freely up to prevent the tension being too great & sloughing taking place.

Bringing a flap up from the neck to form the new lip is perhaps the best method, its only objection being, that it is apt to fall down again but by curving the ends of the incisions, careful stitching & massage this can be obviated, we must not confine ourselves to one operation but choose the one most suitable to the case.

The operation for the restoration of the lip should always be carried out at the same time as the one for the removal of the disease.
Chloroform should always be used as the anaesthetic when possible. In patients who don’t bear chloroform well, cocaine answers the purpose very well.

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I hereby certify on soul+conscience that the above thesis has been composed entirely by myself.

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