attacked; in some places, it was replaced by a whitish growth; in others, the muscle and fibre, though a little pale, were nearly of normal appearance. On microscopical examination, attention was directed to the papilliform growth, to the mucous coat around, and to the deeper seated structures. The mucous coat of all parts examined appeared to me thickened in two directions—first and chiefly in its epithelial layers, and secondly in the subepithelial fibrous tissue. The superficial epithelial coat further was not at all places alike; in some, it existed as a layer of even, though increased thickness, merely varied by the rete mucosum, which had slight undulations; in others, it dipped deeply into the subepithelial fibrous tissue, and was even surrounded by cancer-growth, though, as far as could be seen, unaffected by the contiguity. The papillæ (c) appeared to be no more than rearrangements of the epithelial cells proper to the part, with definite fusiform shapes, which then became welded or fused together (a, b), and so came to have somewhat of a horny texture; in truth, they would appear to have a similar relationship to the tongue as have horny growths to the skin. I could not see that they had any vascular supply. They were deeply set in the surrounding scaly epithelium; and, while their superficial layers were shed, they were replenished from below by the mucous layer. The deeper fibrous structures were very thick, and densely crowded with small rounded nuclei about one three-thousandth of an inch in diameter. In some places, even at some considerable depth in its substance, came tracts of scaly epithelium, which, though surrounded on all sides by the small cancer-nuclei, yet retained their normal appearance. Deeper still came the muscular fibres; they were in most cases quite healthy, though at places surrounded by tracts of nuclei (f, f)."

CASE II. *Ichthyosis Glossæ followed by Epithelioma of the Tongue; Removal of Disease; Recurrence; Ligation of Lingual Artery and Removal of Diseased Portion of Tongue.*—William C., aged 49, a married man, was admitted into Forbes ward, under Mr. De Morgan, in April 1873. He denied ever having had syphilis, and was not a great smoker. He stated that for ten or eleven years there had been a white horny patch upon the left side of the median line of the dorsum of the tongue. This was of an irregularly four-sided shape, and somewhat larger than the ulcer which now occupied its place. The horny plaque sometimes varied in its size, and occasionally soreness or pain was felt in it; these changes, however, always ceased after taking some aperient medicine, so that the patient considered them due to "heat of the body." No other inconvenience was ever suffered until nine months previously to his admission, when a raised red and moist granular-looking ulcer was noticed at the anterior and outer corner of the plaque. This gradually spread until it nearly covered the whole of the horny patch. It caused him no pain, but was in the way while moving his tongue. There were no enlarged glands in the neck. The mucous membrane of each cheek was white and scaly over a small irregular area; that on the left cheek was larger than that on the right.

On April 23rd, Mr. De Morgan removed the diseased patch, with some of the surrounding healthy tissue, by means of a pair of sharp-cutting scissors curved somewhat upon the flat of the blades. Only a small portion of the depth of the tongue was thus removed; there was some smart bleeding, which had to be checked with liquor ferri. The patient made a good recovery, and left the hospital on May 27th. During the months of June and July, he came once or twice to the out-patient department to show himself. He thought the disease was recurring, as there was a little hard nodule just behind the cicatrix, in which he sometimes suffered pain. On August 27th, he was admitted under my care, as this nodule was increasing in size and the pain in severity. A memorandum, made at the time of his admission, states that "on the right side of the tongue, behind the scar of the previous operation, there is a hard nodule, in size rather smaller than a French bean. He has a pricking pain in the part and a pain along the right jaw and in front of, and in, the meatus of the right ear." The presence of this hard nodule near the seat of the old scar pointed to a recurrence of the disease; and its increase in size and the persistence of pain in it indicated the propriety of removing it. The patient, too, was anxious to get rid of the cause of his pain. The question then arose as to what was best to be done. On the one hand, as the anterior extremity of the tongue was free of disease, the removal of the entire right half was not justifiable. Moreover, to safely and thoroughly do this, it would have been necessary to divide the jaw at the symphysis, or the cheek from the angle of the mouth; the same step would have been required for the excision of the diseased parts through the whole thickness of the tongue. On the other hand, to cut away with knife or scissors the hardened tissues would have exposed the patient to great risk of hæmorrhage, which with difficulty only could have been checked. I therefore, on September 3rd, first tied the lingual artery on the diseased side, and then freely removed with a knife all the diseased structures. In

this way I hoped (1) to prevent loss of blood and (2) to retard the return of the cancer by diminishing the blood-supply of the part. The first end was completely obtained. The man was discharged well on September 23rd. In November, he came to show himself at the cancer out-patient department; there was then no sign of recurrence; he could protrude the tip of the tongue beyond the line of the teeth for half an inch. The tip, when thrust forward, was curved considerably to the right side, owing to the contraction following on the previous removal of parts. The buccal mucous membrane was in the same state as when first seen.

CASE III. *Ichthyosis Glossæ followed by Epithelioma of the Tongue.*—Samuel B., of Berwick Street, aged 56, a tailor, in bad health and poor circumstances, applied to the cancer out-patient department on May 1st, 1873. He positively denied ever having had syphilis. For ten years at least he knew he had had white tough patches, irregular in shape, on the dorsal surface of the tongue. These had varied in intensity and area at different times, but had never disappeared to any great extent. Eight months ago, a small elevated ulcer commenced on the left free margin a little way from the tip of the tongue; this had been cauterised several times, but continued to increase.

At the time of his application at the hospital, there was a ragged ulcer extending from the tip nearly to the base, and which involved nearly the whole left half of the tongue. The inner margin of the ulcer was thick, raised, and indurated; while the outer margin was irregular, and even deeply notched, from the pressure of the teeth upon the swollen organ. In the ulcer were two or three excavations, from which sloughs had separated or were separating. On the right half of the tongue, near the fore part of the dorsum, there was a patch covered by thick and leathery white scales of epithelium, rough and harsh to the touch. A similar, but less well marked condition, extended to the under surface of the tongue. The dorsum elsewhere was coated by a thick yellow adherent fur, except immediately behind the leathery patch, where there was an oval-shaped space free from epithelium. There was one enlarged gland beneath the angle of the left jaw. The tongue was freely movable, and speech and deglutition were fairly easy.

From the presence of some bronchitis and the general low state of his health, no operation was advisable at that time. The extensiveness of the ulcer rendered an operation at any time unfavourable; but, as the tongue was swollen, and was becoming still more so, the removal of the whole or a part of it seemed called for, if his general health improved, to prevent the long train of misery attendant upon the great enlargement of the tongue, which not unfrequently occurs when epithelioma of that organ is allowed to take its course uninterfered with. For some weeks, both while an out-patient under me, and an in-patient for bronchitis under Dr. Living, antisyphilitic remedies were tried, for the sake of testing the diagnosis as to which all who saw him were subsequently agreed. The patient convalesced from his bronchitis, but refused to undergo any operation, and left the hospital without permission. No improvement had occurred in the state of his tongue.

AMPUTATION AFTER RAILWAY ACCIDENTS.

By THOMAS INMAN, M.D.Lond., Clifton.

WHEN I was House-Surgeon to the Liverpool Infirmary, about thirty years ago, a man was brought in at ten o'clock at night. He had been brought in a car a distance of about eight miles, and had been lying on the ground four hours after the injury, on a cold night. On examining him, it was found that a railway-engine had taken off both his legs, one just below the knee, and the other just above it.

He was under the care of the late Mr. Bickersteth, who, without loss of time, removed all the smashed part of the leg whose knee was not injured, and secured the arteries. The popliteal artery was seen to be beating strongly, but not bleeding. The knee of the other limb was too much smashed to be saved, and amputation was resorted to in the lower third of the thigh. During the operation, the man was in a curiously somnolent condition, and only waked up when an artery was ligatured. He slept soundly on being put to bed, and recovered without a bad symptom, except that a few days revealed that more of the soft parts below the knee were injured than was at first supposed. These sloughed away. On my going to see the man on the morning after the accident, he told me that the engine had produced "a stun-like feeling," and that he had no sensation whatever in either limb from the time of the accident until he awoke next morning.

During my residence, we had another severe railway smash, this time of the elbow-joint. Every injured fragment which could be found was removed, and the man recovered perfectly and with a flexible joint.

One may therefore demur to Mr. Erichsen's sweeping assertion as to the hopelessness of operating in railway smashes.