one death and one fatal case of the removal of a uterine fibroid must be added, bringing up the total of cases where I have opened the abdomen to 131, with six deaths. At present, a smaller death-rate accompanies the operation of ovariectomy than that of the other abdominal sections. This is seen at once from the figures already given—3 per cent. for ovariectomy, 10 per cent. for all other cases—or even more markedly when we compare Mr. Tait's last list of removal of ovarian and par-ovarian tumours with what one knows of his results in other abdominal operations. During one of the two years when this long list was being made—the only one for which I have seen the report of the Birmingham Women's Hospital—the abdomen was opened fifty-six times by this operator in that hospital. Out of these fifty-six operations, eight were fatal, or, in other words, one woman out of every seven died, on whom Mr. Tait that year performed abdominal section in the hospital. These results have certainly not helped to destroy my fear of the peritoneum, nor, to use Mr. Tait's own words, do they justify me in opening that sacred sac very much as one opens one's pocket.

The incomplete or exploratory operations consisted of two cases of ovarian tumours, where I expressed the opinion that it would probably be impossible to remove the growths; but, as on each occasion I had travelled a long distance to see the patients, and as both were very anxious to have something tried, exploratory incision was advised. In the fatal case, the growth was found to be a multilocular tumour, so adherent as to defy removal, and in addition there were cancerous masses in the omentum and mesentery. The second case occurred in an old lady, aged 75. The tumour weighed fully thirty pounds, and at least one-half of its anterior surface was covered by adherent intestine. An incision was made to see if the adherent bowel could be separated easily or not. Unfortunately—or perhaps fortunately—the intestinal adhesion was very vascular; and, taking into consideration the age of the patient, who had attained to five years beyond the time allotted to man, I determined to empty the sac and close the wound. The contents of the sac were too viscid to flow through the trocar; the opening was therefore enlarged, the contents emptied, the interior of the cyst washed out with warm water, and the opening closed round a large rubber drainage-tube. The sac suppurred, giving rise to almost no disturbance, rapidly closed, and in a few weeks the old lady was able to be downstairs, and is now quite well. The two other cases were not begun as exploratory operations. In one, I entirely failed to remove the uterine appendages, and all that was done was to separate the uterus from its close connection to the tissues over the sacrum. Strangely enough, this has relieved the woman of her backache, though in other respects she has not improved. The last case was one of a large semi-solid ovarian tumour, surrounded by ascitic fluid. Following our usual custom, the ascitic fluid was drawn off, and examined microscopically. No evidence of malignant disease was found in it, although when the abdomen was opened, cancerous masses were seen, not only on the surface of the tumour, but also on the peritoneum and on the liver. In such a case, no good could have resulted from the removal of the tumour, so the wound was closed. The poor woman lived for eight or nine months. I think it right to make a distinction between cases which are begun as exploratory and those which, from error in diagnosis or other cause, have to end as such. For diagnostic purposes no operation has been required, and there has been no mistake in diagnosis.

A SUCCESSFUL CASE OF PARTIAL EXCISION OF THE LARYNX, ON ACCOUNT OF INTRA- LARYNGEAL EPITHELIOMA.

WITH REMARKS,

By LENNOX BROWNE, F.R.C.S.ED.,

Senior Surgeon to the Central London Throat and Ear Hospital.

[The Notes of the case are abridged from the record of Mr. WILLIAM HILL, M.B.Lond., Registrar and Pathologist to the Hospital.]

G. W., aged 61, occupied in a timber yard, applied at the hospital as an out-patient, on November 1st, 1886.

History.—He had first noticed hoarseness of voice, and occasional tickling cough, about two years ago; he had never suffered pain, or anything approaching inconvenience in breathing, except when hurrying to catch a train or omnibus. Gargles, etc., failing to give relief, he was advised by his family attendant, Dr. Gordon, of New Cross, to apply at this hospital.

The patient was a hale looking man for his age, 5 feet 6 inches in height, and weighing 166 pounds. The cause of his hoarseness was

at once revealed on examination with the laryngoscope, which showed that while both vocal cords were congested, the left cord was immobile and ulcerated at its posterior portion. There was at that time but little thickening of the left ventricular band, and of the tissues of the left laryngeal boundary of the pharynx, as is seen by reference to Fig 1, which was drawn six weeks after his first applying at the hos-

Laryngoscopic appearance prior to operation.

pital. There was neither then, nor indeed at any period, involvement of the cervical glands, nor was there any constitutional symptom pointing to malignity. There did not appear any outgrowth projecting sufficiently to justify attempts at removal of a portion for the purpose of microscopic investigation. As the patient admitted having suffered from gonorrhœa some twenty-five years previously, it was decided to submit him to a course of biniodide of mercury, in view of the possibility of a venereal cause for his trouble. This treatment was pursued for six weeks, applications of a solution of sulphate of copper being also made to the larynx twice a week. Under these measures the patient expressed himself much relieved, but there could be no doubt that the ulceration was extending, and there was decided diminution in weight; for on December 13th he weighed only 160 pounds, a loss of 6 pounds in six weeks. It was therefore decided by Mr. Lennox Browne, after consultation with his colleagues, to attempt removal of the diseased half of the larynx, and the patient was admitted into the "Adelina Patti" Ward on December 13th. The operation was performed on the morning of the 15th, Mr. Carmalt Jones administering chloroform, Dr. Dundas Grant, Messrs. Percy Jakins and Hill assisting. Dr. Orwin (prevented from rendering active aid through temporary disablement of the hand) and Dr. Gordon were also present.

The operation, which lasted an hour and a half in all, may be conveniently divided into four stages.

1. A high tracheotomy between the second and third rings, and the introduction of Hahn's tampon-cannula, consisting of a tube surrounded by compressed sponge. This was first dipped in a solution of corrosive sublimate (1 in 5,000).

2. An interval of twenty minutes for expansion of the tampon; anaesthesia being maintained by the administration of chloroform through the tracheal tube.

3. *Thyrotomy.*—The median incision was extended from just above the tracheal opening to the lower margin of the hyoid bone, and all the tissues were carefully divided on a director until the thyroid cartilage was reached. The soft parts over the thyroid and cricoid cartilages were rasped sub-perichondrially, the raspatory being kept so close that the perichondrium was literally peeled away from the cartilage, whilst its relation to the superficial soft parts remained undisturbed. The separation was carried back by this means as far as the median line of the boundary between the larynx and pharynx; no scissors, knife, or other instrument than the raspatory was used. A horizontal incision over the hyoid bone, as recommended by Hahn, was not necessary, the vertical one proving amply sufficient, but part of the hyoid attachment of the thyro-hyoid muscle was severed; the much ossified thyroid cartilage was then divided by cutting forceps along its centre; the wings were separated by retractors, and the growth was seen to be confined entirely to the left half of the larynx, which portion it was decided to remove.

4. *Laryngectomy* was effected by (a) further careful and thorough separation of the attachments to the pharynx by raspatory, knife-handle, and finger-nail; (b) division of the thyro-hyoid membrane, as close as possible to its thyroid attachment; (c) division of the left superior horn of the thyroid cartilage at its root by cutting pliers; (d) division in the median line of the cricoid cartilage, before and behind, with pliers; (e) the divided half of the larynx was then separated from the first ring of the trachea, and a few nicks only were necessary to remove it entire.

The following points regarding the operation are worthy of note. Hæmorrhage, the extent of which is usually described as serious, was, in point of fact, quite trifling; only two small vessels required torsion in the second stage of the operation. Not only were no vessels searched for, as recommended by most writers, but none of any size were exposed, this happy circumstance being doubtless due to the use of the raspatory in preference to scalpel or scissors, and also to keeping so close to the cartilage. The soft parts were little disturbed in consequence. Mr. Lennox Browne expressed himself as indebted to Mr. Henry Morris for the hint to adopt this procedure and to it he attributed a very large measure of the success of the operation in its immediate and subsequent circumstances. The slight oozing which ensued after the removal of the diseased portion of the larynx was checked by a light application of the galvanocautery along the margin of division. This procedure was also adopted for the purpose of destroying any possible fragments of diseased tissue not removed. The left ary-epiglottic fold was divided close to the cartilage of Wrisberg, and the thyro-hyoid membrane close to its thyroid attachment, with the view of impairing as little as possible the action of the epiglottis. The success of this plan was completely shown in the ease with which deglutition was effected three days later. No spray was used; but antiseptic precautions were adopted by the operator, assistants, and nurses first bathing their hands in a solution of the perchloride of mercury (1 in 5,000), and by the cleansing and rinsing of all instruments and sponges in a similar preparation.

The dressings of the wound consisted in dusting with iodoform for two days, and packing with corrosive sublimate gauze. On the third day, iodol was substituted for iodoform, and within the week this was discontinued, the sublimate gauze only being used. All dressings, except adhesive plaster, were dispensed with after the thirteenth day.

The progress of the case was, till the eighth day, characterised by no event except of a favourable nature. The temperature rose to 101° Fahr. on the night of the operation, but after that it was hardly a degree above normal. There was slight bloody expectoration for twelve hours, and some slight pulmonary congestion and bronchitis; but the patient was cheerful, and at no time was pain complained of. The indications of pulse and respirations being equally favourable, the tampon-cannula was removed in thirty hours, and an ordinary tracheotomy tube substituted; this was also removed at the expiration of seventy-two hours, and the patient breathed freely through the natural passages.

Up to this time liquid nourishment had been administered night and morning, poured from a jug into an œsophageal tube, with a funnel orifice. The food consisted of one pint of beef-tea, two eggs, two ounces of port wine, and two grains of Bullock's pepsine powder for each meal. The only discomfort experienced by the patient was that of thirst, which was allayed by small portions of ice; but, until the third day, he was not allowed to drink any fluid by the mouth. Seventy-eight hours after the operation, the patient was ordered a mutton chop to eat, according to the treatment of Hahn, who, for obvious reasons, recommends solid food as the first to be given by the mouth. The patient was able to sit up in bed, cut up his food, and eat it with relish. During all this time the weather had been very unfavourable, and early on the morning of the eighth day, which was exceptionally raw and cold, the patient's breathing became difficult and laboured, the temperature rose from 99.4° to 101.2°, the pulse from 100 to 112, and the respirations from 20 to 32. Unfortunately, the nurse, although recording these observations, did not recognise their importance, and the patient was not seen until this change had lasted over two hours. He was then found to be breathing with much difficulty and distress; respirations and pulse were hardly to be counted, and the condition was one of alarm. It was evident that the upper air-passages were blocked, and though some benefit resulted from the introduction of a feather into the trachea, Mr. Lennox Browne decided to re-insert the tracheal tube through the original opening in the windpipe, which, happily, had not closed. Mustard and linseed poultices were applied to the chest, and steam constantly generated in the ward. The state of the patient was for two or three days one of great anxiety, but, afterwards, all again went well. On Christmas Day, the eleventh from the operation, he had turkey and champagne for dinner, and from that date convalescence was uninterrupted. He "got up" for the first time on the seventeenth day after operation. The tracheal tube was removed on the twentieth day, that is, on January 3rd. His weight was then 148 lbs., being a loss of 12 lbs. since the operation.

January 17th, that is, the thirty-fourth day, tracheotomy-wound quite closed, but, though ample granulation has taken place, union of the upper portion is incomplete. This is due to the fact that, in

consequence of inability to keep the edges of the soft parts whence the cartilages were removed on a level with those so supported, the skin on the left side has become inverted. For the rest, the patient speaks with a wonderfully good though rough voice; it is distinctly phonetic, and he thinks it is "at least as good as before the operation." His strength and general health have been well maintained, and he looks and feels well. His weight is the same as a fortnight ago. The laryngoscopic appearance at this date is represented in Fig. 2. The

Fig. 2

Laryngoscopic view, five weeks after operation

right vocal cord moves freely, but is still somewhat congested; the structures on the left side of the glottis move slightly towards the median line in phonation; the epiglottis acts perfectly, and is not in the least out of position.

January 29th. Wound granulating well, and nearly closed.

Pathological Report.—The macroscopical description need be but brief, as the accompanying sketch (Fig. 3) gives a clear indication of

Fig. 3

Internal aspect of removed portion (life-size).

the parts removed, and of the extent of the disease. The growth was seen to spring from the ventricle, and not from the vocal cord, as had been diagnosed on laryngoscopic examination, in this respect resembling several cases reported by other surgeons. The extent of the

Fig. 4.

Microscopical appearance of superficial section of growth.

disease was also far greater than had been suspected prior to operation, and in this respect the case illustrates the very foreshortened view, with sometimes consequently incomplete diagnosis, to be obtained by

looking into the larynx from above. Generally, the naked-eye evidences were those of epithelioma.

Microscopical Appearances.—The portion removed was placed in spirit, immediately after the operation, and, a few days later, a shaving was cut by hand with a razor from a portion of the growth projecting from the ventricle. (Fig. 3, A.) The structure of this superficial unstained shaving is shown in Fig. 4; it presents the appearance of a typical squamous epithelioma, the nests being remarkably abundant. After the specimen had remained in spirit twenty-five days, a pyramidal portion (base, a quarter of an inch square; depth, one-third of an inch) was removed from the spot whence the shaving had been taken. (Fig. 3, A.) This was sectioned and stained in hæmatoxylin, and was seen, under the microscope, to consist of a dense connective tissue stroma, with great increase of nuclei and cellular infiltration, and of a large number of solid cylinders of an epitheliomatous character, the outermost layer of cells being composed of the columnar variety, enclosing a core of polygonal cells. This condition is shown in Fig. 5. Only one or two distinctly squamous nests were observed near the

FIG. 5.

Microscopic appearance of growth from deeper section.

surface. The bulk of the growth was, therefore, an epithelioma of the columnar-celled variety, with squamous characters predominating near the surface. Taking into account the fact that the ventricle of the larynx is lined with columnar epithelium, it is not to be wondered that the growth exhibited these characters. In shavings taken from the extreme edge of the portion of the larynx removed, neither nests nor cylinders could be detected; and the same satisfactory negative evidence was afforded by repeated microscopic examination of two fragments removed for that purpose at the time of operation, from the margin of the structures left behind.

REMARKS BY MR. LENNOX BROWNE.—When, eight years ago, the late Dr. Foulis, of Glasgow, showed at the Medical Society the patient from whom he had successfully extirpated the whole larynx four months previously, for "papilloma and spindle-celled sarcoma," I ventured to express a doubt whether that operation would ever yield beneficial results commensurate with the immediate danger of its performance, the very short extension of life, and the discomfort of an artificial larynx to those who survived long enough to wear one; and I drew attention to the superiority of the statistics of tracheotomy to those of the radical operation. Dr. Foulis's was the eighteenth complete extirpation, and the second which survived more than nine months, for his patient lived a year and a half, and death ultimately resulted from phthisis. Since that time, complete extirpation has been frequently performed, and there are now fully one hundred recorded cases. The results, however, have not improved, and the operation has been abandoned by many who formerly performed and advocated it.

The operation of partial laryngectomy stands so far on a much more favourable footing, and the brilliant results of Eugene Hahn and other German surgeons have established it as one of far less immediate fatality than complete extirpation, and affording average periods of immunity from recurrence even of the more serious forms of malignant disease, which promise to be almost, if not quite, equal to those provided by tracheotomy. The success of Hahn's operation recently performed in London on an English patient has naturally attracted much attention. Mr. Butlin very shortly afterwards had a similar operation; and he was the first English surgeon to adopt the procedure; the result of his case was quite successful so far as immediate recovery was concerned, though with but partial restoration of voice on account

of the necessity for removal of a portion of the cords in the retained half of the larynx.

The case now recorded is at present satisfactory in the two-fold aspect of immediate recovery and of restoration of voice. I am, however, very far from forgetting the warning which I gave a few weeks ago at the Clinical Society, that this operation cannot be considered as established until a period of life has been attained equal to the average of two and a half years to be procured by simple tracheotomy in epithelioma.

Recurrence must, in the nature of things, be always anticipated; and we have yet to see what sort of history our cases will have in this respect. It is earnestly to be hoped that care will be taken in the selection of subjects for this operation, as otherwise discouragement will be given to its performance where other circumstances would be favourable. It is indicated in unilateral and intra-laryngeal epithelioma, and in recent non-infiltrating sarcoma. It is useless in pharyngo-laryngeal epithelioma, in which the larynx is invaded from the pharynx, and whenever there is implication of the cervical glands and structures adjoining the larynx. It is always possible, in our division of the thyroid cartilage the disease is seen to have extended beyond the limits suspected by prior examination, for the surgeon to desist from removal and to be content with having performed tracheotomy.

A REMARKABLE CASE OF PRIMARY SYPHILIS.

By A. MARMADUKE SHEILD, M.B., F.R.C.S.,
Assistant-Surgeon to Westminster Hospital.

A RESPECTABLE single woman, aged 32, came to me on December 1st. She was well nourished. On the right cheek, just above the angle of the mouth, was a round prominent sessile growth about the size of a florin. It was livid in colour, quite devoid of pigmentary change, and irregularly excavated in the centre by superficial ulceration. A thin non-purulent discharge exuded from the ulcerated surface. The growth infiltrated the tissues of the cheek, but not with the hardness of cancer. The submaxillary lymphatic glands were greatly enlarged, forming a series of manifest almond-shaped swellings, which reached from the angle of the jaw to the symphysis. They were not painful or inflamed, and, though firm in consistence, lacked hardness and fixation. There was no sore throat, or any sign of eruption on the skin.

Towards the end of September, 1886, she observed a small pimple on the cheek, like a "gnat-bite." She picked it frequently, causing it to bleed. About the middle of October, her mistress remarked on its appearance, so she concealed it with sticking-plaster. By the end

of October, the sore was as large as her "finger-nail." She now sought the advice of a chemist, who twice applied "strong caustics." After this treatment it became very painful, and increased greatly in size. The opinion of medical men was now sought. Some said the growth was "lupus," others pronounced it to be cancer, and nitric acid was freely applied; but the growth continued to increase. Taking all the circumstances of the case into consideration, the woman was at once placed upon full doses of mercury, and a very dilute mercurial ointment was applied to the sore.

On December 8th, exuberant granulations had spread round superficially, causing the mushroom-like appearance familiar in malignant growths.

On December 15th, the sore was better, and there was a decided syphilitic eruption over the body and neck, which the patient noticed first on December 10th. The rash consisted mainly of papules and tubercles of a dark "coppery" hue, covered by slight scaly desquamation. The gums were affected by mercury.