always be seen by looking at a glass joint fixed midway in the length. This plan has been used by Sir Thornley Stoker, and I have found it very serviceable in the first three or four days during which the tube is retained in the bladder.

Fatal Cases.

The mortality may be thus summed up: One died of ether bronchitis—he was aged 75—and suffered from mitral disease; one died fourteen days after operation from a suddenly-developed peritonitis; one from pelvic cellulitis; one died in twenty-four hours from sepsis; and one died twelve weeks after operation from gangrene of the right lung. This case was sufficiently well to be out of bed for a couple of weeks, and the wound was nearly closed, when he had an attack of purpura haemorrhagica. He wasted considerably, and all progress ceased. He recovered from this, but four weeks later he had another attack of purpura. Blood came from the bladder, lungs, nose, and intestine. He developed cough and much bloody expectoration. At the *post-mortem* examination the right lung was in a state of gangrene. This death can hardly be attributed to the operation, and if I omit it I have lost only one in the last ten.

Cases for Operation.

I may say, however, that I have never refused to operate in any case, no matter how feeble or advanced in years, when the question to be dealt with was the attempt to relieve the patient from imminent danger. I have treated many by means which are generally accepted as less heroic and so often capable of giving a large degree of comfort. It would be very foolish to lay down the law that all cases of enlarged prostate are to be operated upon. Many men have enlarged prostates, but certainly not all enlarged prostates demand removal. But I have no doubt that if the nocturnal distress is great, if the patient has had recurring attacks of retention, if he has suffered from outbreaks of cystitis, if he has had severe haemorrhage, if he has suffered from any one or all of these, then operation ought to be undertaken. The risks attending these troubles are in a sense more certain than the risks of enucleation. The gratitude of a patient who has been restored to the ordinary method of urination, whose sleepless nights and frequent painful efforts to empty the bladder have gone for ever, impels one who has to do with such cases to urge the advantage of operation. The patients seem to rejuvenate, and are enabled to live a life of peace, at least in this respect.

A CASE OF TOTAL LARYNGECTOMY FOR RECURRENT EPITHELIOMA OF THE LARYNX.

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History.

GEO. H., aged 64 years, a patient of Dr. Menzies, Worksop, had been hoarse for many years, but did not take much notice of this until March, 1902, when a laryngeal examination revealed an extensive warty growth on one of the vocal cords. He was sent to a distinguished London surgeon, who confirmed the suspicion of epithelioma and removed the growth after mesial section of the thyroid cartilage. The patient made a rapid recovery, but soon after his return home he began to suffer from laryngeal stenosis, which, slowly increasing, became so pronounced by February, 1903, that tracheotomy had to be performed. Thereafter he wore a large-sized rubber tube, and was quite comfortable until November, 1905, when he noticed a slight discharge of blood from the tracheotomy opening. As the discharge continued he again consulted Dr. Menzies, who sent him to me on January 8th, 1906. Commencing half an inch above the tracheotomy opening and extending upwards in the middle line for two-thirds of an inch there was an oblong ulcer with slightly indurated margins. The ulcer had eaten its way from within outwards through all the tissues including the lower margin of the thyroid cartilage. A cutting removed from its edge showed under the microscope typical epithelial cancer. There was no obvious

involvement of the cervical lymphatic glands, and he appeared in every other respect to be quite healthy. Total laryngectomy was advised, and the patient, having yielded a somewhat reluctant consent, was sent to a surgical home where he was operated on on January 11th.

Operation.

He was placed supine on a pillowless table with a large sandbag under his shoulders. This position obviated the risk of blood gravitating into the trachea during the operation, and enabled me to dispense with the use of a cannula. Chloroform was given through a Junker's inhaler, and from time to time the operation area was swabbed with a mixed solution of eucaïne and adrenalin. Through a mesial vertical, combined with a transverse, incision, just below the hyoid bone, the various extrinsic muscles were divided close to the larynx on either side. The epiglottis was then separated from the base of the tongue and pulled forwards out of the wound. The mucous membrane covering the back of the larynx was divided transversely on a level with the top of the arytenoids and dissected downwards as far as the tracheotomy opening. In this dissection the pharyngeal muscles were divided from their attachments to the thyroid cartilage. The entire larynx was now removed by cutting through the trachea on a level with the lower margin of the

Fig. 1.

tracheotomy opening. The divided trachea was at once sutured to the skin by several stout silkworm strands. A rubber tube, $\frac{3}{4}$ in. in diameter, was passed through the mouth down into the stomach, and the large gap in the anterior wall of the pharynx closed by three superimposed layers of fine catgut, the innermost layer being placed so as to approximate, but not to include, the edges of the mucous membrane. The upper margin of the restored anterior pharyngeal wall was next sutured to the raw surface at the base of the tongue left after removal of the epiglottis. The skin incisions were closed with silkworm sutures, a small drain being inserted at either end of the transverse wound. The oesophageal tube was intended primarily to act as a mould on which to fashion the new pharynx, and afterwards to feed the patient through, but it was vomited out a few hours after the operation. The patient bore the operation very well.

After-history.

He was fed rectally for the first forty-eight hours, then for the succeeding twenty-four hours through an oesophageal tube. After this he was allowed to swallow, which he did quite satisfactorily. The wound healed aseptically. For several days after the operation he was much distressed by blood and mucus collecting at the tracheal opening, and a nurse had to be in constant attendance to mop up

the discharge. It was found that the semi-prone posture with the foot of the bed raised facilitated its escape. The tracheal wound healed rapidly by granulation, and does not show any tendency to undue contraction. The only serious annoyance he experienced after the first few days was due to the collection of inspissated mucus in the tracheal opening during the hours of sleep. This difficulty ceased after a few weeks, and while it lasted it was checked somewhat by smearing vaseline over the edges of the opening. The patient is now, six months after the operation, in excellent health, can swallow perfectly, has no respiratory difficulty, although he has not worn a tube since the operation, and, most remarkable of all, can carry on a conversation in a loud sibilant whisper. This he effects by drawing air through the nose into his pharynx, and expelling it buccally.

REMARKS.

It is now a well-established fact that epithelioma of the vocal cords usually runs a chronic course, and that for a long time its ravages do not spread beyond the interior of the larynx, while the same disease when it attacks the upper surface of the larynx grows rapidly and produces

Fig. 2.—A. Epiglottitis. B. Epitheliomatous ulcer. C. Old tracheotomy opening

early infection of the cervical lymph glands. This knowledge has been utilized by Sir Felix Semon and Mr. Butlin, who practise thyrotomy and partial laryngectomy for intrinsic laryngeal epithelioma instead of total laryngectomy, which is usually resorted to by Continental surgeons for this disease. A study of their papers and of their carefully-prepared statistics cannot fail to produce the conviction that their operative procedures are much safer than total laryngectomy as it is commonly carried out, and that in early cases, at any rate, their results as to immunity from recurrence are excellent, although I do not think they can be so good as after complete removal of the larynx. An additional advantage secured by resection over total laryngectomy is the ability of the patient to speak, even though it be indistinctly, without the aid of a mechanical appliance. Against this, however, must be placed the tendency to laryngeal stenosis.

Much stress is laid by Sir Felix Semon, Mr. Butlin, and other writers on the miserable condition of patients who have survived the operation of total laryngectomy—a condition which, according to one writer, makes life hardly worth living. Without wishing in any way to challenge the accuracy of the data on which these statements are

made, I can most emphatically say that my patient, apart from the fact that he is unable to speak otherwise than in a whisper, is more comfortable than he was with a mutilated larynx.

While I do not wish to dogmatize on a subject of which I have only a casual practical experience, I venture to suggest that a stumbling-block to the successful performance of total laryngectomy has been the desire to leave an opening in the pharynx for the subsequent reception of an artificial larynx. This doubtful advantage is secured at a very great cost; indeed, I think, at an unjustifiable cost. It involves an open wound, which must be constantly fouled by discharges from the pharynx, and is the most potent factor in producing septic lung troubles, which bulk so largely among the causes of death after the operation. It very greatly increases the difficulty of feeding the patient, and it causes a much-delayed convalescence. Moreover, the benefit gained can be almost equally attained by carrying a tube fitted with valves and a vibrating reed from the tracheal opening up the side of the neck and chin into the angle of the mouth.

I was particularly fortunate in that my patient had an old-standing and fairly low tracheotomy opening. This, conjoined with the posture I placed him in, enabled me to dispense with a tampon cannula. The swabbing of the parts from time to time with a mixed solution of eucaine and adrenalin is, I think, helpful. It deadens the highly-sensitive mucous membrane, and thereby reduces the depth to which general anaesthesia must be pushed, it reduces the oozing from cut vessels, and, perhaps most important of all, it largely curtails the shock incidental to the prolonged irritation of the laryngeal nerves.

APPENDICITIS AND ABSCESS FORMATION.

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THE difficulty of making a diagnosis between disease of the vermiform appendix and disease in the right ovary or Fallopian tube is one of the most important clinical questions raised by the following records. I have given the histories with some fullness to emphasize this point, which is a frequent source of doubt in connexion with abnormal conditions in the right side of the lower abdomen in women.

CASE I.

History.—The first case was that of a lady, 25 years of age, married, and the mother of two children, the youngest 15 months old. She was of slight build and delicate appearance, but I was assured that she was very wiry. In May, 1900, she had an acute febrile attack with pain in the caecal region, being ill about a week. Recovery seemed complete, and her London physician considered that the symptoms were caused by appendicitis. After this the menstruation was irregular, the periods being frequently missed. Eight months later, the patient, who was then in the country, got very wet whilst riding, and on the evening of the next day she was seized with severe pelvic pain, followed two days later by a rise of temperature. The symptoms subsided after about ten days, and a good recovery followed. When convalescence had been apparently established between three and four weeks, a consultation was held by the practitioner in charge of the case with two gentlemen from a large neighbouring town, and after examining the patient under an anaesthetic a diagnosis of recurrent inflammation of the right Fallopian tube was made, for which operative treatment was recommended.

State on Examination.—I saw the patient in consultation, in London, a few weeks later. There was then some tenderness of the fundus uteri, which was displaced backwards, and a small painful substance which felt like an ovary was situated close to the right side of the uterus. There was no pain or swelling over the usual site of the vermiform appendix. The severity of the two illnesses recorded and the tenderness still existing indicated an urgent necessity for an exploratory operation, whether the diagnosis of appendicitis or that of salpingitis was correct.

Operation.—The abdomen was opened eight weeks after the temperature caused by the second attack subsided. The uterus was found retroflexed, it and the right ovary and tube being fixed by vascular, but recent easily-separated, adhesions. When the tube, ovary, and fundus uteri were released and brought into view there was no evidence of disease in them except the adhesions, the fimbriated extremity of the tube being unaffected. On examining the caecum the vermiform appendix was seen to be very adherent and unhealthy in appearance. These parts were deep down in Douglas's pouch, and had been attached to the back of the ovary and tube. At first the appendix seemed unusually short and dilated at its attachment to the bowel but on releasing