tonsil. The throat improved, but after some days fever recurred, accompanied by pain and tenderness in the lower abdomen. The genital organs were normal. Acute peritonitis developed rapidly, and the girl died in a few days.

Post-mortem.—Streptococci were found in the contents of the antrum and in the peritoneal exudation; also in pleural exudation on one side. The author regards the slight traumatism of the operation and the consequent hyperæmia as having probably facilitated a streptococcus invasion, first of the tonsil, and afterwards, by metastasis, of the peritoneum. The pleurisy caused no symptoms during life, and was probably secondary to the peritonitis. *W. Lamb.*

Sawyer, James.—*Hay-Fever: Its Etiology and Treatment.* "Charlotte Medical Journal," December, 1901.

Prophylactic treatment consists in use of tonics, especially strychnia, in increasing doses, for two or three months preceding time of expected attack. On the morning of expected attack give $\frac{1}{100}$th grain of atropine, and again in evening, if indicated, and then once a day as long as necessary.

Remove all abnormalities from the nasal passages, and any unduly sensitive spots on the nasal mucosa, especially on the middle turbinated bone, should be thoroughly cauterized by gently passing over them a probe medicated with glacial acetic acid. This process should be repeated every three days during the few months immediately preceding the expected attack until no sensitive spots remain.

During the attacks apply suprarenal solution (3 per cent. to 10 per cent.) by spray or on cotton-wool, and repeat whenever the symptoms demand, and give internally 5 grains of the desiccated gland every two hours until the full physiological effect is obtained or the symptoms are controlled—at first every three or four hours, then reducing the dose gradually to twice daily throughout the hay-fever season.

Middlemass Hunt.

LARYNX AND TRACHEA.

Basan, Conrad.—*Observations upon Forty Consecutive Cases of Intubation of the Larynx in Diphtheria.* "Lancet," July 13, 1901.

Intubation of the larynx is by no means a difficult operation, and that it is successful in diphtheritic stenosis the table given below sufficiently demonstrates. Since its introduction into the diphtheria wards of the Eastern Hospital it has been given a fairly extensive trial, and, excluding those cases in which it was contra-indicated, intubation was tried before having recourse to tracheotomy. Diphtheria antitoxin was also freely administered, and much of the success in these cases is due to its efficacy. The operation is easy; indeed, the anatomical knowledge possessed by a student, combined with a little manual dexterity that can be acquired by practising upon the *cadaver*, is all that is necessary, albeit there are difficulties in the living that cannot be learned otherwise than by experience. But in spite of the patient's temporary struggles, the obliteration of anatomical landmarks through inflammatory swelling, spasm of the glottis, and so on, it is surprising how easy the operation becomes with a little practice. The instruments used at the Eastern Hospital were supplied by Collin, of Paris. Compared with the ordinary O'Dwyer's, the tubes are lightly made,

shorter, and the fusiform swelling of the body shades off above and below less abruptly. The obturator is jointed, as usual, but the upper extremity has a horizontal slit, into which the end of the sliding catch of the introducer fits. This is in every way satisfactory; it locks safely, and is not liable to get out of order.

The results of the forty consecutive cases intubated are set out in the following table:

	Number of Cases.	Recovered.	Died.
Intubation alone	32	28	4
,, with subsequent tracheotomy	8	5	3
Total	40	33	7

The ages ranged from thirteen months to seven years; the youngest recovery was eighteen months. Of the eight tracheotomies after intubation, four patients had membrane in the trachea. Two of these died from broncho-pneumonia; the other death was that of a child with an impermeable fibro-cartilaginous stenosis of the larynx following upon intubation, who succumbed to a relapse of diphtheria some months later. Of the four cases of death after intubation alone, three were hopeless diphtheria cases. Two of these patients died completely relieved of the obstruction, with the tube in the larynx. The other patient developed scarlet fever two days after admission, and, although she had quite recovered from the laryngeal obstruction, a brawny, spreading cellulitis of the neck set in, with otorrhœa and broncho-pneumonia, and she died twenty-two days after admission. The post-mortem notes of one of the cases in which the patient died with the tube in the larynx are given.

For intubating the larynx the author always adopts the dorsal decubitus position for the patient. Much valuable time is saved thereby should tracheotomy become necessary, for, indeed, intubation should never be attempted in diphtheria without all the requisites for a cutting operation being close at hand. Nearly all the patients require the introduction of a gag, and the breathing during this process may become severely embarrassed, and even cease, so that instant tracheotomy is necessary. Great care and gentleness must, therefore, be exercised in introducing this instrument; it should be inserted on the left side, away from the operator, it being noted that the tongue has fair play, and that the mouth is not unduly widened. For toothless children the index-finger of the assistant inserted as far back as is convenient between the upper and lower jaw is all that is necessary. For patients who refuse to be gagged a very simple plan is to excite the reflex by passing the index-finger behind the last molar teeth. Any struggling should be controlled without in any way embarrassing the movements of the chest and abdomen, an assistant for this purpose standing on the right side of the table behind the operator. Severe swelling of the laryngeal mucosa with an ill-defined epiglottis is not uncommon, and may preclude all possibility of intubation; indeed, the propriety of attempting it under these conditions is questionable, as it is naturally so in cases of naso-pharyngeal and faucial swelling, combined with membrane almost occluding the faucial cleft and completely blocking the nares.

The tube may slip into the œsophagus; this is very common, and is readily discerned by the absence of relief and the gradual shortening of the silk thread attached to the tube. If the epiglottis is held well forward by the introduced finger this accident is less likely to happen. Spasm of the glottis may be so persistent that the tube will not enter for quite an appreciable space of time, whilst the patient's condition begins to give cause for anxiety. It usually yields, however, providing the manipulation is extremely gentle, when the succeeding inspiratory effort readily allows the tube to slip in; indeed, it is good practice to insert the tube during inspiration, for it is in these cases particularly that damage to the laryngeal mucosa and its ventricular bands is likely to occur unless this possibility of spasm of the glottis be always borne in mind.

Vomiting might be considered a very likely occurrence, but it is surprising that, despite the reflex induced, in reality it rarely occurs. This is possibly due to stronger reflexes being simultaneously called into play. With the tube *in situ* the breathing generally proceeds satisfactorily, and the relief is immediate. Retraction of the chest, however, may not in some cases entirely disappear. This is frequently due to blood from the fauces, detached membrane, and mucus narrowing the lumen of the tube. The cough generally succeeds in expelling this, and ultimately the relief is complete. Membrane may be pushed down in front of the tube, and be either free or flapping at its tracheal aperture. Tranquil breathing may succeed in spite of this for a few minutes; when, however, coughing set in and it failed to expel the membrane, respiration ceased and instant tracheotomy was performed. Relief may not be obtained at all. In some cases this is due to the swollen tissues in which the head of the tube is embedded, or to tracheal obstruction. The list of recoveries also contained a case where the tube was enclosed in a laryngeal cast. A patient may progress satisfactorily for a day or two, and the tube then become suddenly blocked with membrane. Unless the tube is instantly expressed or immediate tracheotomy is performed, the child's life may be lost. But although several such cases have occurred in the list given here, a fatal catastrophe has fortunately been averted. The tube may get dry or partially occluded with tenacious mucus and membranous débris, and if the cough is absent, or, if present, is too weak to expel the secretion, signs of distress naturally make themselves evident. The tube may be coughed up at varying intervals. In some cases the patient progresses satisfactorily without further operative interference, in others the tube may have to be returned almost immediately, whilst there are a few cases in which the larynx is so intolerant that reintubation is impossible, and recourse must be had to tracheotomy.

Before discussing the treatment after intubation, the question is raised as to whether the silk thread affixed to the tube should remain. Personally, the author always removes it; its presence is a constant source of irritation and annoyance to the patient, and it necessitates the hands being tied to the bedsides, adding yet another cause for discomfort. Unless passed between the interstices of the teeth, it is very liable to get bitten through. In favour of its retention, however, it certainly affords a means whereby the nurse can readily remove the tube in an emergency; but as nurses can be taught to express the tube successfully, this reason loses much of its import.

Although the cases in which membrane was expectorated by the tube are few in number, the author cannot help thinking that in many

of the younger children membrane is coughed up and swallowed with the mucus. Despite the fact that intubation may be done in an incredibly short space of time, patients must not be allowed to get too bad; intubation should be performed before tracheotomy becomes justifiable, and should the first attempt be unsuccessful, it is well in many cases to remove the gag, and to allow the patient to recover from the temporary embarrassment. Persistent and prolonged attempts to intubate are wholly unjustifiable, and may induce an irrecoverable collapse of the lung.

With regard to treatment, as early as possible diphtheria antitoxin should be injected, 6,000 or 12,000 units at once, and repeated in twenty-four hours if necessary. Immediately after the tube is inserted, cut the thread above the knot, and before withdrawing it steady the tube with the index-finger of the left hand passed behind the epiglottis. The mouth must now be cleaned out, and it is advisable to let the patient sit up, as the cough is more effectual in this position. See that the breathing is now well established before returning the patient to bed. No food should be given by the mouth, for intubated patients can rarely swallow with safety. Nasal or rectal feeding is by far the best method; giving nourishment with the foot of the bed raised is at the best tedious and frequently unsatisfactory.

To insure that the laryngeal tube is kept as clear as possible it is most important that the patients should cough well and frequently, and for this reason prolonged sleep is injurious. If the cough is absent, or, if present, it is weak and unproductive, sips of water should be administered regularly every two or three hours, day and night, to excite the reflex. The author has found this simple expedient of the greatest service; indeed, considers it an indispensable part of the treatment. Should the secretion be scanty or tenacious, a mixture containing iodide of potassium, antimonial wine, ipecacuanha wine, and tincture of squills is a great help in restoring its fluidity and ready expulsion. Irrigation of the nose and throat should be suspended as long as the tube remains in the larynx; the mouth, however, may be swabbed out when necessary. How long the tube is to remain in, providing the breathing is satisfactory, is a most difficult question to answer; indeed, there are no indications to guide one as to when to remove it. At the end of three days is a very good time to express it. Expression is readily accomplished thus: The patient sitting upright, extend the neck, and, with the left hand grasping the occiput, place the ball of the right thumb just below the cricoid cartilage, and bend the fingers of the same hand round the nape of the neck. Press the thumb backwards and slightly upwards, and at the same time pull the head well forward on to the chest. This rarely fails to dislodge the tube, and there is no danger of it being swallowed. The tube should be carefully examined, and if there is much discoloration and the urgent symptoms return, it is better to perform tracheotomy; otherwise reintubate, and wait another three days. Frequently a little recession returns, but it soon passes off.

The unsuccessful attempts to intubate the larynx are not dealt with in this paper, nor are the cases which were intubated after tracheotomy for the purpose of restoring laryngeal breathing. They were, however, very few in number, and they call for no special reference. With antitoxin intubation should hold a place in the treatment of diphtheritic laryngeal stenosis, but, unfortunately, its scope of usefulness is practically limited to hospital practice. A great desideratum in its favour is that it preserves the continuity of the respiratory tract.

The author records his gratitude to Dr. E. W. Goodall for kindly introducing to his notice Dr. Raoul Bayeux's method of "enucleating" (expressing) the tube. *StClair Thomson.*

EAR.

Broca, Auguste, and Laurens, Georges.—*Meningitis following Chronic Otitis, simulating Cerebral Abscess.* "Annales des Maladies de l'Oreille, du Larynx, etc.," No. 1, January, 1902.

The authors report cases where, after the most careful diagnosis, no abscess was found on operation, although meningitis was cured.

The utility of lumbar puncture in such cases is questioned, on the ground that valuable time might be lost should an abscess be really present. *Anthony McCall.*

Jürgens (Warsaw).—*Two Cases of Rupture of the Internal Carotid Artery in Middle-Ear Disease.* "Monatschrift für Ohrenheilkunde," January, 1902.

In both cases the patient was a Tartar recruit with a history of ear disease of only two or three weeks' duration. In both there was considerable sloughing of the skin of the meatus with extensive destruction of the deeper parts, the middle and internal ear and the carotid canal forming one irregular cavity with eaten-out, carious walls. The wilful application of some strong caustic, with a view to escape military service, was strongly suspected. In both cases there was very profuse and repeated hæmorrhage, but the patients did not die of that, but of the septic complications—leptomeningitis and pyæmia.

As a rule the artery gives way at the junction of its vertical and horizontal positions, and the rupture is slit-like—3 to 8 millimetres long and 2 to 3 millimetres broad—but in the cases under consideration there was extensive sloughing of all the vascular coats. This and the short duration of illness pointed to traumatism. *W. Lamb.*

Lermoyez, Marcel.—*Pyæmia following Thrombo-phlebitis in Middle-Ear Disease.* "Annales des Maladies de l'Oreille, du Larynx, etc.," No. 1, January, 1902.

Lermoyez points out the importance of tying the internal jugular before opening the lateral sinus after the antrum operation.

He warns against the careless use of iodoform, and states that the urine should always be examined, as in such cases the symptoms of iodoform poisoning might be mistaken for those of pyæmia.

Anthony McCall.

Sendziak (Warsaw).—*Favourable Influence of an Attack of Erysipelas on the Course of a Severe Case of Acute Otitis Media.* "Monatschrift für Ohrenheilkunde," December, 1901.

A man of fifty-two had been under treatment for five weeks suffering from otitis. In spite of leeches, paracentesis, antiseptic injections, and other treatment, he got worse rather than better. The affected ear was quite deaf, he had great mastoid tenderness and pain all over the side of the head, and the discharge was profuse. He refused to submit to the mastoid operation. At this point he contracted a sharp attack of facial erysipelas, which lasted rather over four weeks. Very soon after the erysipelas attacked him his aural symptoms began to improve,