formation, metachromatism, Neisser's staining reaction, appearances on gelatine and agar-agar, and virulence, are no more certain criteria for the diphtheria bacillus than appearances on gelatine, indol reaction, and virulence are certain criteria for the cholera vibrio. I have maintained for some time that bacilli actually, and not merely distantly, resembling the diphtheria bacillus, are found frequently in the throat and elsewhere in chronic ulceration, impetigo, cancrum oris, etc., and that in many cases, by continued growth, these bacilli may be so altered as to resemble the diphtheria bacillus still more closely, and even to acquire pathogenic properties. The diphtheria bacillus is, in my opinion, widely distributed—frequently in modified forms, it is true—but still in such forms which, except by artificial and imaginary criteria, such as would not be recognized in the case of other micro-organisms, cannot be separated from the Klebs-Loeffler bacillus, which, even under the best conditions, is a highly polymorphic organism. I therefore consider the work of Dr. Todd of all the greater importance, since it is a further contribution to the view, which is gradually gaining ground, that the diphtheria bacillus is found in many lesions which are not "diphtheria," and that the various tests, generally enumerated, do not suffice to distinguish the various modifications from the "text-book variety" of the Klebs-Loeffler bacillus. It is unnecessary to draw attention to the bearing which such a view has upon the etiology and pathology of diphtheria.

StClair Thomson.

LARYNX, &c.

Barnet, L. E. (Dunedin).—*Removal of a Foreign Body from the Left Bronchus of a Child.*[1] "Australasian Med. Gazette," June 20, 1898.

REPORT of a case of impaction of a portion of the antenna of a cray fish, one inch long and one inch in diameter, in the left bronchus of an infant. Owing to there not being any history pointing to the probability of such a foreign body being present, great difficulty was experienced in diagnosing the obstruction, as, when tracheotomy had been performed, the probe passed freely through the obstruction into the left bronchus; after several attempts it was successfully extracted, and the patient did well. The portion of antenna had been swallowed with the bristly segmented hair pointing upwards, which, whilst facilitating passage downwards, rendered nugatory all efforts of expulsion. *StGeorge Reid.*

Fraenkel. — *Pathological Specimens of Larynx due to Measles.* (Biologische Abtheilung des arztlichen Verein, Hamburg, June, 1898.) "Münchener Med. Woch.," 1898, No. 28.

THE preparations showed deep ulceration on the vocal cords and over the arytenoid cartilages, which extended to the perichondrium and cartilage, causing partial necrosis. One preparation showed a funnel-shaped ulcer at the anterior commissure, at the base of which the necrotic thyroid cartilage could be seen and felt. Another preparation showed, in addition to necrotic changes on the posterior pharyngeal wall, necrosis of the mucous membrane over both vocal processes of the arytenoids, with the necrosed cartilage lying adjacent.

Condition, if recovery ensues, is associated with hoarseness or difficulty in breathing. It forms a parallel to the processes observed in some cases of typhoid, and is due to invasion of pyogenic microbes from the surface. He observed four cases in one epidemic, and two in another. *Guild.*

[1] Read before the Annual Meeting of the No. 2 Branch of the British Medical Association.

Jurasz (Heidelberg).—*Demonstration of Case, where Laryngeal Cancer had been Removed by Endo-laryngeal Operation.* (Jahresversammlung des Vereins süddeutscher Laryngologen zu Heidelberg.) "Münchener Med. Woch.," No. 27, 1898.

A WOMAN, forty-four, was seen on the 19th January, 1897. She had been hoarse for a year. An uneven, superficial, ulcerated thickening was seen on the right vocal cord. It was thought to be tubercular as there was impaired resonance and diminution of the respiratory murmur at the left apex. Mobility of the cord was intact. In the middle of February the thickening was removed with a sharp spoon, but reformed quickly, so that in March a second removal was required. Microscopic examination was indefinite. Disease slowly progressed; removal was undertaken again in August. Certain parts were suspicious of malignant disease. In October the granular infiltration extended over almost the whole pars ligamenta of the right cord. The left cord was also symmetrically thickened and hyperæmic. There was no glandular enlargement, no pain on swallowing, no discomfort except aphonia. Sharp spoon was used again, and epithelioma was diagnosed microscopically. On December 8th, with local anæsthesia, he removed the right vocal cord from the anterior commissure to the processus vocalis with an instrument which was shown, at the same time thickening on the left cord and anterior commissure was cauterized. As he thought this would impair the healing, on the 14th December he cut out completely the anterior part of the left cord and the infiltration in the anterior commissure. There was no hæmorrhage nor pain worth mentioning. In February healing was complete. From the cicatrix originated two membranes resembling the vocal cords, which had the fault that they were united anteriorily. The patient for four weeks has spoken with a loud hoarse voice.

Remarks: The epithelioma developed on the right cord and produced by contact the same change on the symmetrical part of the left cord. Thus there was auto-inoculation of cancer as described by Semon and Butlin.

Local circumscribed cancer can be removed as thoroughly with suitable instruments by endo-laryngeal methods.

The vocal cord removed may be almost completely replaced by cicatricial tissue.

In the discussion which followed the dangers of hæmorrhage were pointed out by Noltenius and Ludwig Wolff. In the experience of Moritz Schmidt, and Jurasz they are slight. *Guild.*

Killian, Gustav. — *Direct Bronchoscopy.* (Jahresversammlung des Vereins süddeutscher Laryngologen, May, 1898.) "Münchener Med. Woch.," 1898, No. 27.

HE has practised bronchoscopia inferior since July, 1897. He anæsthetizes the bronchi with ten per cent. of cocaine; then introduces a tubular speculum, oiled and warmed, into the tracheal wound. He uses for illumination Kirstein's frontal lamp or Carper's electric lamp. In a patient whose height was one hundred and sixty-eight centimètres he used a tube with a diameter of nine millimètres. At a distance of fourteen centimètres from the tracheal wound he reached the bifurcation, and passed into the right bronchus. At first he saw only its beginning. He pushed the tube carefully onwards, and saw the entrance to the bronchial tube which led to the upper lobe; then the division of the bronchus for the middle and lower lobes. The tube was five centimètres past the bifurcation; its end by external measurement was in the fourth intercostal space. The tube was arrested by the breadth of the bronchial lumen. There was no hæmorrhage nor pain. The bronchial mucous membrane was dry and pale. The bronchial rings shone

through. The division of the right bronchus looked analogous to the trachea. In order to see the left bronchus he applied cocaine by means of a pledget introduced through the speculum, and passed the tube 4·5 centimètres into the left bronchus without discomfort and saw the division into the lower and upper lobes.

He examined a boy of six in the same way. The breadth of the tube was 7·5 millimètres.

Direct bronchoscopy may be practised with the same results from above.

The larynx should be anæsthetized with twenty per cent. of cocaine, especially on the epiglottis and posterior wall. In a patient whose height was one hundred and fifty-two centimètres the distance from the mouth to the bifurcation was twenty-seven centimètres. Usually only the entrances to the chief bronchi are visible. Further introduction of the tubular speculum (diameter nine millimètres) into the right bronchus for a distance of five centimètres brought into view the division into middle and lower branches. The division of the left bronchus is seen at a distance of four centimètres. He obtained the same results in a series of cases.

In nervous cases it is better to gradually accustom the patient to the procedure and not to attempt too much at once.

Embarrassment of breathing is not caused. In bronchial catarrh there is increased irritability, and mucous may require to be removed from the tube. Coughing is not dangerous.

The practical value of direct bronchoscopy cannot at present be determined apart from foreign bodies and bronchial affections. It may be of use in diagnosis and treatment of lung diseases. *Guild.*

Klemperer, F.—*Ueber die Stellung der Stimmbänder nach Recurrens und nach Posticusdurschneidung.* (Jahresversammlung des Vereins süddeutscher Laryngologen, May, 1898.) "Münchener Med. Woch.," No. 28, 1898.

THE author's investigations were prompted by Grossman's communication, which stated that the median position of the vocal cord which was hitherto considered the result of abductor paralysis was due to complete paralysis of the recurrent; after division of the recurrent the corresponding vocal cord was in the position of marked adduction. Dogs were used in the experiments. When the exposed recurrent was squeezed with forceps, the vocal cord was seen in the middle line; the same position was observed after section. This is due to nerve irritation on section. By careful preparation of the nerve, with a clean cut through the nerve, the vocal cord was not in the middle line. Where it does occur, the median position is only transitory. After a few minutes in all cases the cord was away from the middle line, in the position, which must be described as the cadaveric, it remained. This division is only marked by division of one recurrent. Double division induces stenosis due to diminution of the intratracheal air pressure. The real position after double division is seen first after tracheotomy. After single division of the recurrent, the paralyzed vocal cord is fixed one to two millimètres from the middle line. The other cord is abducted strongly on inspiration, there is no stenosis. After division of one crico-arytenoideus posticus, he found the corresponding vocal cord near the middle line; the arytenoid did not move outwards, and there was no abduction. After double division of the postici, the condition exactly corresponded to that after double abductor paralysis in the human subject.

Guild.

McBride, P. (Edinburgh).—*On the Origin of the so-called Laryngeal Vertigo.* "Archiv. für Laryngol. und Rhinol.," Bd. VII., Heft 1.

IN an article on laryngeal vertigo, by Schadewaldt, published in the "Archiv für Laryngologie," Band V., the author's views on this subject were misrepresented.

He here states them afresh, maintaining his theory as to the manner in which the attacks are produced.

The attack is preceded by a fit of coughing, or, in other words, by a number of spasmodic inspirations, followed by spasmodic expirations, with partially closed glottis. Now, it is undoubted that the glottis is closed during coughing, and that this takes place after a full inspiration. In laryngeal vertigo the closure is more complete.

The author holds that the increased pressure on the walls of the alveoli interferes with the free circulation of the blood through the lungs, and consequently diminishes the amount of blood in the left side of the heart. In addition, the pressure upon the large intra-thoracic vessels hinders the return of the venous blood; and it is on this account that the face becomes pale or bluish-red after spasm of the glottis. It is quite conceivable that compression of the heart between the unyielding lungs and the thoracic wall may contribute to the paralysis of its movements.

In support of the above view it should be mentioned that Weber showed that forced expiration with closed glottis could easily produce insensibility; and on one occasion, while making experiments of this kind on himself, he had an attack which, from his description, must have closely resembled the so-called laryngeal vertigo.

In the author's opinion the phenomena occur, in the majority of cases, in the following order: after a number of fits of coughing the glottis is closed so tightly that the vocal cords do not yield to the compressed air within the lungs and trachea; intra-thoracic pressure ensues, and, in consequence, unconsciousness. Immediately hereafter the vocal cords relax; so that nothing indicates an interference with respiration. *A. B. Kelly.*

McKee, A. B.—*Asepsis in Otology and Laryngology.* "Laryngoscope," May, 1898.

THE following are suggested as practical hints:—

1. To sterilize cutting instruments, place in a two and a half per cent. carbolic acid solution for fifteen to twenty minutes, and then dip for a few seconds into boiling water.

2. To sterilize trays, dishes for instruments, etc., pour over them a few drops of alcohol and ignite.

3. To sterilize blunt instruments (forceps, spatulæ, etc.), pass through a spirit lamp.

4. To sterilize catheters, antrum cannulæ, etc., boil for a few moments in a porcelain-lined dish.

5. To sterilize cotton pledgets for wiping out the ear, dip the cotton-wound probe into a saturated alcoholic solution of boric acid, ignite it, and allow it to burn for a few seconds, extinguishing before the cotton is charred.

6. To preserve needles, keep in pure lysol. *W. Milligan.*

Moure.—*Adenoiditis in the Adult.* "Rev. Hebd. de Lar.," Jan. 29, 1898.

THE author draws attention to the not infrequent occurrence of acute and subacute inflammation of post-nasal adenoids in the adult—an accident which has been observed at any age up to fifty-five. Acute coryza, follicular tonsillitis, pus infection from sinusitis, rheumatism, the menopause, and syphilis, are given as direct or predisposing causes of such attacks. The nasal mucosa and the posterior pharyngeal wall may be normal in appearance while the patient complains of nasal obstruction, with loss of nasal resonance, deafness, tinnitus, and an unaccustomed dropping of muco-pus from the post-nasal space. Posterior rhinoscopy reveals a variable degree of redness and swelling of the post-nasal adenoid tissue, with discharge of muco-purulent or serous discharge from the crypts. In at least one case bacteriological examination has proved the pneumococcus of Friedländer

to be the predominating micro-organism present. The lips of the Eustachian orifice are swollen, and the signs of acute or chronic middle ear catarrh are present. Purgatives and quinine are indicated internally, and cocaine and boracic ointment should be introduced through the nasal passages, coupled with inhalations. On no account should Politzerization or nasal douching be practised for fear of driving infective secretions into the middle ear. The only serious prevention of recurrence is removal of adenoid hypertrophies by operation. *Waggett*

Ross, George F. (Montreal). — *Bilateral Abductor Laryngeal Paralysis.* "Canada Med. Rec.," May, 1898.

AFTER discussing the importance of thorough examination of the larynx, and the relation which the general condition bears to disease of that organ, the clinical history of a case of bilateral abductor paralysis is given.

It occurred in a married man aged fifty, with the following history:—Eight years ago he had gonorrhœa. Three years ago he had an attack of acute rheumatism, which left his left leg weak and painful, causing lameness for eight months. For twenty-three years he had taken three or four quart bottles of beer daily. Complained of soreness of throat in beginning of 1897, and in March of that year, when drinking water, had a choking spasm. Since that time this has always occurred on attempting to swallow cold fluids. Continued to work as cab-driver until February, 1898, when increasing difficulty in breathing compelled him to cease. During the night-time he always seemed threatened with suffocation. Every morning coughing would dislodge mucous from the throat.

Examination.—Left leg is smaller than right, and left patellar reflex exaggerated. Pupil of left eye smaller than right. On closing eyes cannot walk without staggering. Voice will break occasionally with high falsetto tone. Arms are normal in co-ordination. Examination of larynx shows catarrhal laryngitis. Epiglottis normal. Ventricular bands hyperæmic, partially overlapping cords. Breadth of cords in sight two millimètres, margins thick and reddish. Both vocal cords permanently abducted, leaving only very narrow chink. Inspiratory effort forced the cords still closer together, producing very severe stridor.

The patient remained in the hospital two weeks on full diet. The treatment consisted of sedatives, tonics, and electricity to larynx. He improved in every way. The chink also widened sufficiently to afford fairly comfortable breathing and less disturbed sleep. The intention was to continue galvanism and Faradism and report again later. *Price Brown.*

Woodbury, Frank (Philadelphia).—*Urticaria, involving the Larynx and causing Asphyxia.* "Philadelphia Polyclinic," July 2, 1898.

CASE of a man aged forty-five, who, whilst in good health, was suddenly seized with dyspnœa and faintness, followed by all the symptoms of extreme asphyxia. When medical aid arrived, the man, who was apparently dead, revived under stimulants and injection of $\frac{1}{100}$ grain strychnine nitrate. He stated that he, once before—three years ago—had a similar attack, with transient swelling of the face, accompanied by congestion, and that since then he had suffered from frequent slight attacks, apparently having no connection with errors of diet. Previous to the present attack he had been extremely busy, with very little sleep or food. He had just finished a long railway journey, and had taken a cheese sandwich with a glass of beer, when he began to feel his lips swelling and feeling like wood; his face rapidly became swollen and he lost consciousness. On examination the characteristic lesions of urticaria were found on both legs; and the patient remembered having suffered from intense itching as the attack was coming on.

St George Reid.