THE TENTH INTERNATIONAL MEDICAL CONGRESS, BERLIN

4th to 9th August, 1890.—(*Continued from p. 486*).

SEVENTH MEETING.

Laryngological Sub-Section.

COMBINED WITH THE PHYSIOLOGICAL AND NEUROLOGICAL SUB-SECTIONS IN THE BERLIN PHYSIOLOGICAL INSTITUTE.

FELIX SEMON (London) and VICTOR HORSLEY (London). *Experimental Demonstration of the Centre and Peripheral Motor Innervation of the Larynx, and a Theory of the Motor Innervation of the Larynx.* While Horsley prepared his experiments, Semon spoke of the difficulties of physiological demonstration in public. The resistance of the animals to narcotics, the individual resistance against operation, and the influence of shock may easily disturb the best prepared experiments. A failure, therefore, of experiments which can be successfully made in the laboratory would prove nothing against facts.

The larynx has two widely different functions, viz., respiration and phonation. Of these the former is mainly automatic, though not entirely beyond the influence of purposive or volitionary influence, whilst the latter is practically purely volitional, and only in certain acts, such as laughing and crying, is the result of reflex influence. According to this principle, we have to investigate the respiratory and the phonatory representation of the larynx in the medulla oblongata. (*a*) There exists a reflex abductor tonus of the vocal cords keeping the glottis wide open, whilst the thorax continues its rhythmical movements. Excitation of the upper part of the floor of the fourth ventricle evokes persistent abduction of the cords, whilst the thorax continues to rhythmically expand and contract. The bulbar representation of the larynx is bilateral, both vocal cords moving together for inspiration and expiration on stimulation of the respective portions of the bulb on one side only. (*b*) Phonatory representation: Immediate closure of the glottis is observed upon excitation of the ala cinerea and the upper border of the calamus scriptorius. Excitation of the restiform body, and its inner border, in a vertical line opposite of the lower half of the fourth ventricle, also produces abduction of the vocal cord of the same side.

The authors adhere most firmly to the belief that in the great majority of all cases of progressive organic lesion of the laryngeal nerves the result is primary paralysis of the abductor apparatus, and not a primary contraction of all the laryngeal muscles. The character of the representation in the cortex cerebri is acceleration of the rhythm and intensification of the respiratory movements by exciting the precrucial gyrus. Concerning phonation, the authors conclude unilateral irritation produces bilateral effect. Clinically, in any unilateral affection of this area spasms of the glottis, *i.e.*, bilateral adduction of the vocal cords, may occur, *e.g.*,

laryngismus stridulus. Unilateral destruction produces no effect. There is, therefore, no such thing as unilateral paralysis of a vocal cord from lesion of a cerebral hemisphere. This is made evident by the fact that motor aphasia is not identical with aphonia. Also after extirpation of the entire hemisphere the vocal cords continue to move perfectly bilaterally in respiration, and on stimulation of the phonatory centre of the opposite side prompt bilateral adduction occurs. Powerful or long-continued excitation of the laryngeal area produces true epilepsy of the vocal cords. So it is proved that the epileptic cry represents a stage in the cortical excitement popularly termed an epileptic fit. Exposing the basal ganglia and internal capsule, the authors have found that here the respiratory fibres are contained in the anterior limb, and in the region of the genu. Here also are the phonatory fibres.

HOOPER (Boston). *Methods of Demonstrating Laryngeal Movements.*—The author was the first to prove that, in a slightly etherized animal, irritation of the recurrent produces closure of the glottis, and, in deep etherization, produces dilatation. The same effect is produced if the recurrent is cut and its peripheral end is irritated. The ether produces its effect not only through the cerebrum, but also upon the nerves. He therefore concludes that there are biological differences between the two groups of muscles. The ether paralyses first the voluntary muscles, secondly, the automatic muscles. The musculus crico-arytenoideus posticus must be looked upon as an automatic muscle. The author showed the results of his experiments upon an etherized animal in a very instructive manner.

SEMON remarked, concerning the relation of the larynx to the central nervous system, that in functional diseases, such as hysteria, the adductors are affected first, and that there exists in the cerebrum of the dog a phonatory centre discovered by Krause, and also found by Semon and Horsley. In all animals irritation of one centre produces bilateral contraction. After destruction of the phonatory centre and extirpation of a whole hemisphere, the reflex action of the glottis continues. Horsley performed some experiments proving these facts.

ONODI had proved that the crico-arytenoidei postici lose their electrical contractility sooner than the other muscles of the larynx. The musculi vocales interni preserve it longest.

DUBOIS REYMOND mentioned the inspiratory phonation observed in men and animals.

EIGHTH MEETING.

HERYNG (Warschau). *Can Laryngeal Phthisis be Radically Cured by Endo-Laryngeal Surgical Treatment?* A great many of the patients suffering from laryngeal phthisis certainly die from the disease of the lungs, independently of the laryngeal affection, and a great many of the tubercular affections of the larynx are certainly incurable, but we must do the best possible to diminish pain for such patients, to prolong their lives, and to give them the chance of radical cure. Upon these grounds laryngeal treatment must be recommended.

Of twenty-eight patients described by the author in 1887, twelve have

died, of ten the present condition is unknown, and six are yet under treatment. Three of the patients who subsequently died remained without recurrence. Since this time the author has treated thirty-seven cases by his method. In thirty-two cases the ulcers have been cicatrized for a shorter or longer time. Five cases are definitely cured.

More than thirty authors have since that time applied the method, published their results, or written them in letters to the author. He showed a lady, forty-eight years of age, treated by him in 1886 by curettement. The local condition and the general health of the lady is now very good. He also showed a specimen, proving the possibility of cure of the severest form of laryngeal phthisis. The patient was curetted in 1886, and has since died from pulmonary phthisis. In another specimen taken from a patient who died from influenza pneumonia the formerly infiltrated posterior wall was transformed into a strong cicatrix, in which neither tubercles nor bacilli could be found with the microscope. Indications for surgical treatment are circumscribed infiltrations of the posterior wall, infiltration of the ventricular bands, ulcers and tubercular tumours. The author concludes that perfect cure is rarely observed, but long-lasting improvement is often obtained by surgical treatment.

DISCUSSION.

M. SCHMIDT has obtained seven cures out of sixty-three cases treated by curettement.

MASSEI treats tuberculosis by iodoform and inhalations of sublimate.

SCHNITZLER prefers the more expectant methods.

GLEITSMANN showed photographs of a case of pharyngeal tuberculosis which had been cured.

SCHECH applies surgical treatment only in selected cases.

ROSENBERG recommends applications of menthol.

SCHRÖTTER recommends surgical treatment only for tubercular tumours, and does not believe that radical cure is often obtained.

B. FRAENKEL says that it is often rather difficult to differentiate the diseased parts from the healthy parts. The difficulty here is greater than in cases of cancer.

LAZARUS accentuates the importance of general treatment.

KRAUSE accentuates the importance of the destruction of the tubercular deposit, and the tolerance of the larynx against operations.

SCHEINMANN (Berlin). *Local Treatment of Laryngeal Phthisis.*—As prophylaxis against laryngeal phthisis, the author recommends that patients with diseased lungs shall use for a long period, internally, creosote and menthol, and shall also employ inhalations of menthol or cresoline. He recommends massage for the treatment of pareses and catarrhs; for the local treatment of the ulcers he applies lactic acid and pyoktanin for severe cases, and in patients who resist treatment he recommends the application of electrolysis or surgical treatment.

PREDZEBORSKI (Lodsz) showed a patient, whose laryngeal phthisis was cured by Heryng's method.

Syphilis of the Upper Air Passages.

Papers read by SCHRÖTTER (Wien), LEFFERTS (New York).

SCHRÖTTER.—Of 1465 throat patients in his clinic the number of syphilitics was 16·8 per cent. Of these syphilitics the nose alone was affected in 1·1 per cent.; complicated with other manifestations 1·7 per cent.; the pharynx alone in 5·4 per cent.; complicated with other affections in 8·6 per cent.; the larynx alone in 6·4 per cent.; the trachea and bronchi in 0·2 per cent. Amongst the out-patients the proportion of syphilitics was 2 per cent., but the number varied in different years. In the clinic for syphilitics of Prof. Lang, in 36 per cent. of the cases affections of the pharynx and the air passages occurred. Cicatrices were observed from the slightest to the highest degrees of malformations and stenoses. Catarrhs and erythemata, not always easily differentiated from one another, are often observed in secondary disease, sometimes also papules and condylomata. The gravest form of syphilitic affection is the gumma. Ulcers are observed from the slightest erosions to the most extensive loss of substance. A very dangerous affection is perichondritis; by its tendency to ankylosis it destroys the function of the arytenoid cartilages. To cure cicatrices and ankyloses, only one method is effectual, viz., the dilatation invented by the author. Sometimes this method may be combined with surgical treatment of the cicatrices and adhesions. Processes similar to those in the larynx are observed in the nose, and may produce here the greatest malformations. Sometimes it is possible to prevent the malformation by the introduction of hard rubber tubes.

LEFFERTS described his method of dilatation of acute and chronic strictures. He applies modified O'Dwyer tubes. He has obtained very good results also in cases where the strictures were of very high degree.

NINTH MEETING.

SCHNITZLER (Wien). *Combination of Syphilis and Tuberculosis in the Larynx.*—The combination of these two diseases occurs much oftener than is described, and the author has observed sometimes both forms simultaneously in the same patient, and also the transformation of tubercular into syphilitic affections and *vice versâ*. He reports three cases: (1) Combination of both forms. Death from phthisis florida. The *post-mortem* examination showed syphilitic cicatrices and tubercular ulcers of the larynx. (2) Ulcers on the soft palate and the vocal bands. Two years later, adhesion of the vocal bands; infiltration of the lungs. Cure of the stenosis by endo-laryngeal operation. Improvement of the general health by inunctions. Three years later, death. *Post-mortem* examination: cicatrices of the palate, polypoid degeneration of the vocal bands, chronic degeneration of the lungs, amyloid degeneration of the liver and the kidneys. Osteitis gummosa. (3) Ulcers of the larynx, with great loss of substance, occurring five years after a syphilitic infection; cure by inunction. Some months later gummatous processes, infiltration of the lungs, hectic state, hæmoptysis and death. The combination of the two diseases can be declared by the proclivity of a diseased organ to be infected, also by a

new affection being a *locus minoris resistentiæ*. Syphilitic cachexia inclines to tubercular infection, and in a tubercular patient an acquired lues will have a grave process. The diagnosis can be made by inspection of the pharynx, naso-pharynx and larynx, anamnesis, presence of bacilli, and the effect of a specific treatment on the syphilitic part of the disease. The prognosis is grave, but sometimes improvement can be obtained. In spite of the tuberculosis, antisyphilitic cure must be undertaken if the general condition of the patient improves greatly under iodide of iron.

BRESGEN (Frankfurt-o-M.) showed a modified Rabierske powder-insufflator, with foot bellows and tube for the accessory cavities of the nose, and a Duplay speculum with long branches.

REICHERT (Berlin) showed (1) a long bilateral nasal speculum, (2) a nasal knife, (3) a nasal saw, (4) an instrument for adenoid vegetations, (5) a modified galvano-cautery handle, (6) a guillotine for tumours of the posterior laryngeal wall.

CHOLEWA (Berlin) showed a palate hook.

ONODI (Buda-Pesth) referred to a case of chronic fibrinous pharyngitis.

TENTH MEETING.

Acute Infectious Inflammations of the Pharynx and Larynx.

Introduced by MASSEI (Naples), M. SCHMIDT (Frankfurt-o-M.).

MASSEI spoke of erysipelas of the larynx, which he was the first to describe. It begins with acute swelling of the pharynx and larynx. The mucous membrane is of a dark-red colour. The patient has a high degree of fever, and the curve of the fever resembles that of other forms of erysipelas. The patient suffers from dysphagia, so that swallowing is often impossible. In severe cases there also arises a great degree of dyspnœa, more inspiratory than expiratory. The laryngoscope shows œdema of the mucous membrane of the larynx. The swelling has a wandering character, characteristic of erysipelas, and often changes its locality. The disease may be primary or a complication of general erysipelas. The diagnosis can be verified by culture of the specific microbes. Prognosis is doubtful, because the dyspnœa may become dangerous, and intense adynamia may terminate the life of the patient. The treatment consists in the application of ice, inhalation of sublimate, stimulants, and in great degrees of stenosis tracheotomy must be performed.

SCHMIDT.—By Jurgensen and Senator a highly dangerous disease of the throat is described, which has the following complex symptoms:—It begins with slight fever and difficulty of swallowing. Then follows swelling of both tonsils and the whole neck, and the cervical glands swell to colossal dimensions. Then follows unconsciousness, and in a few days the disease generally ends in death from adynamia. The disease must be regarded as a consequence of infection by micro-organisms. It is a form of septicæmia. The treatment must be stimulating. If the swelling extends to the larynx, tracheotomy may be necessary.

THORNER reported one case of erysipelas of the larynx and two of pharyngitis phlegmonosa.

SCHECH had also observed both affections.

B. FRAENKEL believed that erysipelas of the larynx and phlegmon are two different affections.

SEMON believed that erysipelas laryngis, phlegmon of the pharynx, and angina Ludovici are different forms of the same infection by streptococci.

CHIARI reported a case of phlegmon of the epiglottis consequent upon wounding it by a piece of bone.

BREBION (Lyon). *On Adenoid Vegetations.*—If the adenoid tissue in childhood is not hypertrophied it disappears in the period of puberty, but if it is hypertrophied it persists during the whole life, but undergoes fibrous degeneration.

LUC (Paris). *On Adenoid Vegetations at Different Ages of Life.*—Adenoid pharyngeal tumours disappear sometimes, but not always. They are often seen in adults, and may also here cause troubles of hearing. The degeneration is caused by arterio-sclerotic processes in the vessels of the tumour.

MICHELSON remarked that ulcers of the septum which have the size of furrows always have a syphilitic origin.

MASSEI had seen adhesions of the vocal bands following syphilitic plâques and sub-cordal gummata in children.

PINIACZEK referred to a case of cicatricial laryngeal stenosis cured by resection of a part of the cricoid cartilage, and subsequent dilatation.

SCHMIDTHUYZEN (Aachen). *Bronchial Stenoses following Syphilis.*—The author has observed two cases of this disease. In the first case there was a greatly stenosed trachea, so that it was nearly impossible to introduce a fine probe. The highest degree of stenosis was at the bifurcation. In the second case the principal bronchus of one side was so stenosed that no air could enter the lung. In this case it was not possible to make a diagnosis *intra vitam.*

MARCEL (Bucharest). *Hysteria and Nasal Disease.*—A lady, twenty-seven years old, had for seven years singular hysterical attacks. They began with a feeling of tickling in the left nasal passages, ascending to the eyebrows and descending to the neck, followed by a sensation of suffocation, and then followed the real attacks, which consisted of convulsions and unconsciousness, lasting twenty-four hours. On removal of a polypus from the left nasal cavity the condition was entirely cured, and at the same time the relation between polypus and reflex neurosis was proved.

DALY (Pittsburg). *Relation between Nasal and Ear Diseases.*—The author referred to the result of a collective study upon the relation between nasal and ear diseases. The greater proportion of all affections of the ears arises from nasal disease. Every physician will have occasion in his practice to confirm this relation.

CAPART (Brussels). *Rare Pharyngeal Tumours.*—(1) Gumma of the left tonsil resembling a cancroid, cured by antiseptic treatment; (2) sarcoma of the right tonsil and the base of the tongue cured by arsenic.

M. SCHMIDT had always observed cure by arsenic in sarcomata.

CHIARI mentioned that the arsenic treatment was recommended by Winiwarter.

R. WAGNER (Halla-o-S.). *Median Position of the Vocal Cord in Recurrent Paralysis.*—This position is produced neither by the muscles innervated by the nervus laryngeus nor by the crico-arytenoideus lateralis, but is entirely the effect of the musculus crico-thyroideus. The author showed the results of his experiments upon animals in instantaneous photographs of the larynges of these animals. His experiments were conducted in Exner's laboratory.

GRABOW (Berlin). *Contribution to the Innervation of the Larynx.*—The lower fibres of the vagus, and not so often as is believed the accessorius, preside over the motor functions of the larynx. The author reported numerous physiological experiments to prove this thesis.

PAUL KOCH (Luxemburg). *Tracheal Tumours.*—The author gave a careful review of the literature of tumours of the trachea, and related two of his own cases. The first patient had a tumour of the size of a nut, nearly closing the trachea. Tracheotomy was performed, and death followed from hæmorrhage from the tumour. The *post-mortem* examination showed it to be an angio-sarcoma. The second patient did not allow tracheotomy and died from suffocation. As *post-mortem* examination was not performed, nothing could be said as to the nature of the tumour. In most cases extirpation *per vias naturales* is impossible and tracheotomy must be performed, followed by extirpation of the tumour.

BRYSON DELAVAN (New York) showed (1) a new instrument for adenoid vegetations, and (2) the original tonsillotome of Physick.

CASSELBERRY (Chicago). *Laryngeal Cysts.*—The author had operated upon a cystoma of the larynx containing eight cubic centimètres of fluid. The tumour was situated on the left arytenoid cartilage. Such tumours must be regarded as retention cysts. Sometimes they become very large, and may cause dyspnœa and make tracheotomy unavoidable.

KAYSER (Breslau). *On a special movement of the Arytenoid Cartilage in recurrent Paralysis.*—Beyond the movement executed by the arytenoid cartilages in recurrent paralysis to the diseased side by the contractions of the musculi transversus and obliqui, another form of movement is also observed, called by the author *Pendelzuckung.* This is a reflex movement, like the knee and foot phenomena. Further observations will show if this movement can be used for diagnostic purposes.

PINIACZEK (Krakau). *Examination of the Trachea through the Tracheal Fistula.*—The author showed instruments described by him, tubes similar to Zaufal's nasal tubes, serving for examination of the trachea. On introducing them it is possible to observe the deeper parts of the treachea, and sometimes the first portion of the large bronchi. It is thus possible to see foreign bodies in the trachea, croup membranes, neoplasmata, cicatricial stenoses, compression stenoses, and pathological weakness of the walls. Operations for these different conditions can be

performed by the help of the tubes. The author showed a foreign body removed from the bronchus by the help of his tracheal speculum.

TOEPLITZ (New York). *A Rare Case of Laryngeal Tumour.*—The author removed a large white tumour from the right vocal cord. The microscopical examination showed it to be a chondro-sarcoma. The patient has been four years without recurrence.

MASSEI showed a horizontal mirrorstroboscope. By very well painted drawings introduced into the apparatus it is possible to demonstrate the movements of the glottis, paralysis, and the movements of floating neoplasms in a very distinct manner. *Michael.*

ASSOCIATION MEETINGS.

American Laryngological Association.

Baltimore, Thursday, Friday, and Saturday, May 29, 30, *and* 31, 1890.

President—Dr. JOHN N. MACKENZIE.

(*Continued from page* 491.)

DISCUSSION ON DR. KNIGHT'S PAPER.

Dr. BOSWORTH differed from Dr. Knight in saying that sarcoma of the naso-pharynx demanded the more radical operation. The only case of sarcoma of this region he knew followed by recovery, was one in which the patient was treated by the mildest measures only. If we treat sarcoma as a local disease, we are on safe ground. At present we can get at all parts of the nose without resorting to the operations mentioned, and the old operations are no longer necessary. The best results have followed the plan of attacking the growth through the nose, and by careful manipulation, taking it away piecemeal. The cold wire snare is best in his experience. In carcinoma no form of treatment is of service.

Dr. MULHALL recorded a case resembling Dr. Knight's. It was of small-celled sarcoma invading both nostrils, and appeared to have developed twelve months after a fall, which injured the nose, in a man of fifty. When seen by the speaker, the patient presented a mass of bleeding fungous material projecting from both nostrils. Hæmorrhage was caused by touching it. The speaker advised removal piecemeal with the galvano-cautery, and discountenanced any radical operation. After clearing one nostril the patient ceased to attend. He died in about four months with repeated hæmorrhages and inanition, the disease lasting about a year altogether.

Dr. BOSWORTH remarked that the case was reported as one of "fibro-sarcoma," and asked if there was any change in the character of the tumour, or its appearance, corresponding with the occurrence of malignancy.

Dr. KNIGHT stated that while under observation the neoplasm was