AMERICAN LARYNGOLOGICAL ASSOCIATION.

Thirty-second Annual Congress, held at Washington, D.C., May 3, 4, and 5, 1910.

JAMES E. LOGAN, M.D., *of Kansas City, Mo., President.*

(By courtesy of the *New York Medical Record.*)

First Day—Tuesday, May 3.

PRESIDENT'S ADDRESS.

BY DR. LOGAN.

He paid a tribute to the founders of the Association, reminding his hearers of the unfavourable conditions under which these men began their work. It had come to be recognised that the two main functions of the nasal cavities and the naso-pharyngeal space were respiration and drainage, and that nothing must be allowed to interfere with the free and proper performance of these duties. It was, of course, plainly seen that congenital deformities and the traumatisms of childhood as well as accidental injuries in adult life produced conditions rendering respiration imperfect and prohibiting drainage. Hence the rhinologist had ceased merely to spray out nostrils and apply topical remedies, and had become a surgeon. Reference was made to the sudden death from accident of Dr. Gordon King, of New Orleans, an active Fellow of the Association, and a tribute was paid to his memory.

THE NASAL PHENOMENA OF NEURASTHENIA.

BY DR. CHARLES P. GRAYSON.

Recent neurology drew a rather sharp line between inherited or essential neurasthenia and that which was acquired, or more or less voluntarily assumed, and which was, indeed, scarcely more than symptomatic of an auto-intoxication exerting a pernicious effect upon the higher nerve centres. To the rhinologist there was practically little difference between the two. The nasal disorder of neurasthenia was to be differentiated from hay fever. The exciting causes of the former were different from those of the latter, and bore no relation to season, animal, or vegetable excitants, and were relieved by outdoor life, which aggravated hay-fever

https://doi.org/10.1017/S1755146300186044 Published online by Cambridge University Press

cases. Excitants of the former might be central, while those of the latter were peripheral. But in the former the vasoparesis and the infiltrative tumefaction of the turbinates were at times even more accentuated, and so complete had been the vascular stasis that the incision of the œdematous turbinates have sometimes let escape a quantity of mere blood-stained serum. Such a condition as this might well account for the headache, mental apathy, and even melancholia of neurasthenia. In such cases mere cauterisation of the turbinals was insufficient. They should be first drained of their serum by multiple puncture or free scarification followed by the cautery, either chromic acid or galvanic. Internally such tonics as the glycerophosphates of lime and soda in combination with full doses of strychnine should be given.

Dr. B. R. Shurly (Detroit) said that he had made during the last year observations on carrier pigeons after making long flights. He made sections of the spinal cord, observing under the microscope the action of fatigue, and it was possible to note an absolute change in the finer granulations of the anterior portion of the larger nerve-cells. Such a change in the human being would explain the various vaso-motor neuroses confronting us in neurasthenia. There was also an actual change in the natural secretions. The dryness in the air-passages which these neurasthenics often complain of would promptly respond to regulated doses of sheep's thyroids. Again, the exhibition of iodine was often of great value.

Dr. J. Payson Clark (Boston) said that no one would feel justified in making a diagnosis of neurasthenia from nasal conditions alone. The more we knew of the latter the more cases would we be able to remove from the category of neurasthenia. In some cases he had found in both antra of Highmore a glairy mass which would come out in one piece, and the removal of which rid the patient entirely of local symptoms which were greatly affecting his general health.

Dr. R. C. Myles (New York City) had seen such cases as Dr. Grayson described produced by sarcoma of the septum and by various sinus inflammations. In other cases there was an intumescence of the tissues relieved by surgical intervention which did not affect the sinuses. These patients did not stand operation well, and after them often became profoundly depressed. He had seen during the past winter cases of peculiar pains in the neck, thyroid enlargements, excited hearts, etc., which the dried thyroid had aggravated rather than relieved.

Dr. H. L. Swain (New Haven) thought that there was in some of these neurasthenics some anatomical conditions or physical properties in the mucous membranes differing from those of normal individuals. They had thinner-walled vessels, less fibrous connective tissue and fewer muscular elements. Given this lack of firmness in texture of the vessel wall and the hyperæsthetic nerve-endings and we had ample cause for the condition under consideration.

Dr. Grayson, in closing, said that many of the phenomena might be due to other conditions than neurasthenia. Various toxæmias might cause elevation of temperature, œdematous turbinates, etc., but these conditions were transient. In the class of cases described in his paper

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the symptoms were continuous. They must have been due to something else than toxæmia, for they had improved under general treatment while the local condition remained the same.

Some Points in the Comparative Anatomy of the Larynx in the Anthropoidea.

By Dr. J. Gordon Wilson (Chicago).

This paper was based on studies of the larynges of a Chinaman, orang-outang, several *Macacus* monkeys, and a marmoset. These were compared with the larynges of a Caucasian, adult and infant, a young lion, and some of the domestic animals such as the cat, dog, and horse. In the Chinaman the characteristic features were: (1) A pouch behind the arytænoid; and (2) an anterior sinus, both of which are Simian characteristics. In the orang-outang the distinguishing features of the laryngeal ventricle and its appendages were—(1) Their union across the middle line anteriorly; (2) the pouch-like cavity posteriorly behind the arytænoid; and (3) the extra-laryngeal sacs. In the *Macacus rhesus* the floor of the ventricle was almost level with the edge of the true vocal cord, while the false cord was only slightly, if at all excavated, except where the appendix came off. Anteriorly the true and false cords approximated near the middle line. No canal or sulcus existed as in the orang-outang. On the other hand, the cords of each side were separated by a vertical median furrow which passed up into the entrance of the median sac so that a probe passed up from below and entered the sac. In the marmoset the aperture between the true and false cords was a mere slit. The ventricle came anteriorly to within 0·5 mm. of middle-line. No transverse sulcus connected them. In the *rhesus*, however, they were separated by a median longitudinal furrow. At the upper part of the median gutter lay a marked depression suggesting the opening of a median sac, but no trace of one was found on careful dissection. A probe passed up from the ventricle into the appendix reached into a small cavity in the hyoid near the middle line. The body of the hyoid was expanded, being 1 cm. broad in the middle line, and indicated the position where both the ventricles met together though they did not fuse. The second portion of the paper indicated the relation of the thyro-arytænoid muscle to the vocal cord. In connection with this subject microscopic drawings were presented and the variations traced throughout the series of animals studied. The various theories as to the functions

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of the laryngeal sacs were thus given: That they acted as resonators, that they poured secretion on the vocal cords and kept them moist (Fraenkel), that they lightened the upper part of the body and assisted them (apes) in climbing (Vrolick), and that they acted as a protection (extra-laryngeal sacs in apes) for the vessels of the neck (Denker). The author stated his view that in emotional states these inert sacs could be called into play, could be distended and modified in form. Thus there could be given to vocal emission a tone of peculiar and significant intensity. It appeared to him that the characteristic cry of the howling monkeys was not intended to frighten the animals' enemies, as is generally stated, but was intended to modify the voice in order to express mental states and emotions. A monkey was capable of uttering some half-dozen sounds of different pitch. The howling was most marked during the breeding season. Regarding the appendix, the author discussed its varying size in relation to laryngocele and the lateral extra-laryngeal sacs in man. Laryngocele was an enlargement of the appendix which projected beyond the normal limits of this diverticulum, for example, into the sinus pyriformis or above the hyoid into the glosso-epiglottic fossa. The extra-laryngeal sac was an enlargement of the appendix which projected through the thyrohyoid membrane lateral, the thyrohyoid muscle, and lies under the platysma hyoids. There appeared to be sufficient evidence that certain enlargements of the appendix were pathological, *e. g.* the presence of a tumour blocking the aditus laryngis causing a dilatation of the ventricle. But in a general way all were to be classed with hernia due to a congenital or acquired weakening of the thyrohyoid membrane, and, as a consequence, dilatation subject to respiration. In a comparative study of the musculature directly related to the vocal cord the outstanding facts appeared to the author to be a gradually increasing complexity of the thyro-arytænoid muscle and a closer approximation of it to the ligamentum vocale. The facts suggested a function directly related to the true cords and their physiological activity. They showed the development of a mechanism by which a finer or more exact control of the vocal apparatus can be obtained. The incorporation of the muscle in the cord would bring the activities of the cord under the control of the nervous system. If the sacs could be used to vary the voice in states of emotion, how much more exact, how much more capable of development, would such a muscular mechanism be?

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Exhibition of Anatomical Preparations Demonstrating Communication Between the Blood-vessels Supplying the Dura, the Orbit, and the Nasal Chambers.

By Dr. George E. Shambaugh (Chicago).

He said that these vascular connections could be easily made out in gross dissection except that the vessels of the mucosa, of the nasal sinuses, and those of the dura and orbit required the preparation of microscopic sections. When it was shown, however, that the vessels of the dura and orbital periosteum, nasal mucosa, and sinus mucosa sent branches to supply the bony plates separating these structures, it could be assumed that connection between the two sets of vessels occurred within these plates. The author alluded to the teaching of Zuckerkandl and Killian on this subject.

The Manifestations of Recurrent Influenza of the Nose and Throat.

By Dr. J. L. Goodale (Boston).

During the last few years his attention had been attracted to a group of cases exhibiting a well-defined symptom-complex. They had been characterised by a primary involvement in the lymphoid tissue in the pharynx or naso-pharynx, with an immediate extension of inflammatory phenomena to the mucosa of the sinuses, trachea and bronchi, with simultaneous subsidence of the inflammation in the lymphoid tissue. There was a history of annual attacks of gradually lessening mildness. Examination at the onset revealed reddening and swelling of the lymphoid follicles in the pharynx. It was important to note that the involvement of the lymphoid structures preceded any disturbance of the nose or lower air-passages. An important feature was the involvement of the ethmoidal sinuses and of a definite region of the bronchi on the affected side. It was also noted that if there was a septal deviation the middle turbinate on the concave side was more frequently involved than its fellow. The question arose, what was the pathological link existing between such attacks in the regions which predisposed them to invasion? In the nose we might have chronic hypertrophy or actual polypoid degeneration of the mucosa. In the bronchi there was no direct lesion shown by *post-mortem* findings. We might have bronchiectasis or hypertrophy of the

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bronchial mucosa. It would seem, however, that we probably had a state of affairs in a definite area of the bronchi analogous to that of the involved turbinate. Out of a series of twenty cases the author had never been able to abort any of them. Application of the silver salts to the inflamed pharyngeal granules doubtfully shortened the duration of symptoms, while the sinus and bronchial stages were not influenced but came on regularly. It seemed to him that while the symptoms were increasing in intensity, transition to a colder, drier, and higher region did more harm than good. He had come to regard perfect rest at home as the best course in the first half of the affection. After the acute stage was passed and the fever had subsided, it seemed as if removal in the winter months to a warmer and moister climate gave little improvement. Patients were no better after their return than before. Local cauterisation of perhaps a single follicle in the pharynx was more beneficial to the cough than were sedatives.

Dr. W. E. Casselberry (Chicago) desired to emphasise the good resulting from cauterising some one follicle or group of follicles in the pharynx. Persistent tickling and irritation were greatly relieved by this procedure. Next in order he would place cleanliness of the secretions.

Dr. J. E. Logan (Kansas City) had been inclined to assign the pharyngeal recesses as the place of entrance of infection in these cases. The application of a 30 per cent. solution of silver nitrate in these cases had been very successful.

Dr. Goodale had found in his experience with the disease in his own person that crude carbolic acid answered every necessity of a cauterant, and preferred it to the silver salt. It was difficult to apply properly medicinal agents to the naso-pharynx. The upright arm of the applicator needed to be much longer than was usually the case.

Quinine and Urea Hydrochlorate as a Local Anæsthetic.

By Dr. E. Fletcher Ingals (Chicago).

For a long time he had been searching for an agent that would produce prolonged anæsthesia of the mucosa for the relief of hay-fever and hyperæsthetic rhinitis. In the treatment of the latter condition he had used this anæsthetic many times before making long, deep, linear cauterisations across the inferior turbinate. He combined 15 per cent. of the urea-quinine solution with a 5 per cent. suprarenalin solution of 1 : 2000. He had used the same solution in the larynx, trachea, and bronchi in connection with ether anæsthesia in six bronchoscopies in children for the removal of foreign bodies from the lungs without any unpleasant results. It gave excellent results in a painful operation on the ethmoid cells.

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Here it was injected submucously, diluted about fifteen times with topical application in the nares in three or four cases. He had employed it also for turbinectomies, removal of polyps and spurs, and for submucous operations. It seemed to him to act much better than did a 20 per cent. solution of cocaine in adrenalin 1 : 1000. In nasal neuralgia and in one case of hyperæsthetic rhinitis it did not seem to do well, as it smarted so badly. He had found that ordinarily the healthy nose would bear a 10 per cent. solution. Rubbed up with sugar of milk, a strength of 5 per cent. was as strong as could be borne in a nasal snuff. It was a very valuable anæsthetic, but he did not expect very much from it in either hay-fever or hyperæsthetic rhinitis, but in view of the claims made for it in producing prolonged anæsthesia, and in view of the old treatment of hay-fever by nasal applications of a solution of quinine, he thought it was well worthy of a trial in these affections. The solution turned to a brownish hue after a few hours, but seemed to work as well as ever, except that the activity of the adrenalin was somewhat diminished. It was better to combine the solutions just as they were to be used.

Dr. J. Solis-Cohen had for many years used this remedy in pernicious malarial fever. He had removed growths from the larynx with as much facility as with cocaine. He had also used it in operations in the naso-pharynx.

Dr. W. E. Casselberry inquired if he had had any experience with it in laryngeal tubercle.

Dr. B. R. Shurly had used this remedy in tonsillectomies, but its injection had been followed by considerable swelling. He had known of glottic œdema following its use.

Dr. J. E. Winslow had for some months done all tonsillectomies under this anesthetic. Injection should be made of a 3 to 5 per cent. solution some fifteen to twenty minutes before operation. He had had no bad results, although there was sometimes considerable swelling. With regard to the prolongation of the anæsthesia, his experience did not bear out that of the statements of various writers.

Dr. H. L. Swain said that the protoplasmic death mentioned by Dr. Wilson was a most desirable thing to accomplish in laryngeal tubercle, simply from a humanitarian point of view.

Dr. Solis-Cohen had had under treatment a severe case of tuberculous ulcer of the larynx, and one application of a 20 per cent. solution of this anæsthetic allowed the patient to swallow for two or three days. Anæsthesia followed in two or three minutes.

Dr. Ingals, in closing, said he had had as much bleeding with this as with any other anæsthetic. He had not injected the tonsils at all. Considerable swelling had followed injection in his own cases. Most of them had prolonged anæsthesia. The first few times he had used it in the nose it did not even take down the swelling, and the bleeding was so obstinate that he had had to use adrenalin to check it.

(*To be continued.*)

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