

# CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

*Meeting of Tuesday, February 18, 1919*

THE PRESIDENT, DR. ELMER L. KENYON, IN THE CHAIR.

DR. WALTER B. SWIFT of Boston addressed the society on

## **Problems Involving the Nasality of the Human Voice.**

Dr. Swift appreciated the fact that he had been requested to address the society and thought this pointed to the fact that men were becoming interested in some of the more complex things that were inside the specialty. Speech defects had been left to the end of our study because the subject was considered absolutely too complex and hard to analyze, but in the last few years that attitude had largely changed and medical men were having their eyes opened to the simplicity of the things that looked so complex before. He considered speech a function of this specialty and thought that by understanding and trying to build up the capacities of the function they would not only become finer and more thorough throat and ear men, but that it would be of value financially and in research. The subject of speech defects was much like the nervous system in medicine. The nervous system was left unstudied and unknown for many years, but twenty or twenty-five years ago people went into it, and things that formerly could not be recognized were now easy to understand, so much so that there was now a recognized system of diagnosis of nervous disorders. This complex field was opened out, and its parts separated and divided so that the parts could be seen and analyzed and one could make scientific judgment upon it.

The same thing had occurred in speech until now it is fairly easy to diagnose defects and build up functions. He hoped that the members of the society would become interested in the relationship of this work to public school work. He was devoting his entire time to speech disorders, for it seemed to him he saw a large field unplowed. There was no field in medicine that was so interesting as this field of speech. There was a national organization composed of about two hundred

and fifty members that had been in existence for about four years, and up to date four hundred and thirty papers had been read in that organization.

In Chicago public schools they are endeavoring to build up a plan similar to the one in operation in Cleveland, where they had a large and successful speech department in the public schools. There they had three thousand cases with fifteen teachers who were trained to do the work. Here in Chicago the cases were not taken care of until they were in the higher grades, and that was largely without diagnosis. In Cleveland they have diagnosis and also a movement for prevention, which was a new idea in speech correction. They begin by training speech cases in the kindergarten and expect in that way to prevent from one-half to three-fourths of the cases of speech disorder higher up. This was very interesting and valuable, and they hoped to be able to amplify and perhaps improve on it in Chicago. There ought to be a good deal of expert diagnosis in these cases because speech correction could not be established without portraying the causes behind it. The diagnosis of paralysis, of Mongolian idiocy and all other diseases was of great value, and no program of speech correction in the public school was reliable or what it should be without the diagnosis in the background. They wanted to have Chicago an example to the world, and with such an able representative as Dr. Kenyon in the field this could be accomplished here. There were enough men interested to accomplish these things if they worked in collaboration.

Dr. Swift described in some detail the various different forms of speech defects. He believed that speech correction was now being taken up in a more scientific way than ever before. At the present time Cleveland stood as a model for speech correction for America, but they hoped to have even a better department in Chicago. At present no city had the movement for speech defect prevention that they had in Cleveland, no other city had speech correction taught in two normal schools as they had there, and no other city had speech correction inserted into the regular school grades as there. It was not merely a mouth treatment; but when done in the modern way was largely mental upbuilding. It built up the visual perceptions and a more acute ear than was ever the

case before, especially in the teachers who studied the subject. In the Cleveland schools they had "part time" teachers who did this work part of the time in the afternoons, and he considered this better than having special teachers for speech correction. After careful analysis they had come to the conclusion that this was the most efficient way to attack this problem.

There were four fields or faults to be dealt with in the nasality of the human voice—"Obstruction Nasality," "Deconstruction Nasality," "Misdirection Nasality" and "Misplacement Nasality," and all must be treated in different ways.

**Paper: The Efficiency of the Modern Velum Obturator.\***

BY CALVIN S. CASE, M. D.

DISCUSSION.

DR. ELMER L. KENYON stated that a gentleman had consulted him without announcing that he had come from Dr. Case, but saying that he wished to speak about treatment for his mother. The purpose of the patient was to have Dr. Kenyon hear him speak without knowing that there was any disturbance of the voice. Dr. Kenyon listened while the gentleman explained about the trouble of his mother, but after a time asked him whether he had come because of his voice. Dr. Kenyon recognized the fact that the gentleman had some palatal defect, but the quality of the voice was something he had never heard in an adult cleft palate patient before excepting a very few times. Dr. Kenyon regretted very greatly the impossibility of demonstration of this interesting and remarkable case. The obturator rode upon the palate, covering over the extensive cleft; it moved up and down, being carried by the elevators and depressors of the soft palate, as if it were a part of the organ itself.

The thing that had impressed him with reference to cleft palate work was that the cleft palate operator often insisted upon destroying the function of the elevators of the palate, and this was exactly what Dr. Case did not do. No palate

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could functionate normally where the action of the elevators was completely or nearly destroyed. In the case referred to there was comparatively free action of the soft palate, and the result was very fine with reference to the voice.

Dr. Kenyon spoke of the need of voice training in cleft palate patients—why did nearly all need voice training, even though the palatal defect had been largely corrected? The acquirement of accuracy of articulation with the confusional sounds and the defective anatomic conditions resulting from a defective palate was usually only partly possible. Both the sensory and the motor word centers became wrongly educated and the patient after a time failed to appreciate his own articulative errors. It thus became necessary to reeducate both these centers in order to correct their own errors.

He mentioned a case of tonsillectomy in a child of six. The child talked with a nasal voice and had always done so. The patient came from Dr. Truman W. Brophy, who had found no palatal deformity. The palate was shorter than normal, and the child had thus formed the habit of nasality. An operator on the tonsils had come along—and that was inevitable these days, and one reason why these speech troubles should be introduced into laryngologic meetings—the inevitable operator had performed tonsillectomy and adenectomy. If operation had not been undertaken, training of the feebly acting soft palate would have been easier and much more certain of success. The extirpation of the adenoids, which were of positive usefulness in the training of this patient's voice, was clearly contraindicated, at any rate at this time. What happened in the course of the operating—and it happened over and over again—was that the palate, already too short, was so stiffened up by retraction of the one posterior pillar that now the hope of improvement in the child's voice was much reduced. The laryngologist evidently did not realize that the operation was a serious matter in this child and should be undertaken, if undertaken at all, with exceptional care.

A second case was somewhat similar and also came from Dr. Brophy. The patient was a man of thirty-six or thirty-seven years, whose palate had been operated upon seven or eight times in his adult years by Dr. Brophy; and the patient was here from out of town to be operated again. The work

done upon the palate had been very extensive and could hardly have been improved upon. The palate had been entirely reconstructed. It was a remarkable piece of work, but adhesions had occurred between the soft palate and the posterior wall, so that the opening to the nasopharynx was now not more than half an inch in diameter. Dr. Brophy was intending to enlarge this opening because of the patient's difficulty in breathing through the nose. The voice was nasal but not markedly so. Dr. Brophy was of the opinion that the reason he could not breathe through the nose was on account of the palate adhesions. Examination of the nose showed that a marked deflection of the septum existed on one side, and a very large lower turbinate on the other; the breathing space was thereby greatly diminished. What would be the proper procedure from the standpoint of the laryngologist in such a case? Probably nine-tenths would say, "Straighten the septum and give the patient a normal breathing space," but Dr. Kenyon did not believe that would be good practice. He suggested to Dr. Brophy that he should be careful about greatly enlarging the palatal opening into the nasopharynx and that operation in the nose should be undertaken with extreme conservatism. If the patient was operated upon at all it should be with the idea of keeping the nasal space not broad, but relatively narrow, because in proportion as the nasal space was made broad would the abnormal resonance tend to be increased.

In reference to operating upon the palate, he was not a palatal operator and made suggestions with a good deal of diffidence. He had been impressed with one thing through the examination of many tonsillectomized throats, and thought he had learned something by examination of these throats which might eventually be of advantage in pointing to a better procedure for palatal operating. He had become convinced that many of these little tonsillectomized patients would have spoken with a nasal voice if they had had to depend upon their soft palates alone to prevent such a voice. A certain portion of these patients spoke with a normal voice because they had struggled to learn a new procedure for correcting their impaired nasal voice. This consisted in using the upper portion of the superior constrictor muscle to take the place of what had before the operation been present as the posterior

pillars. The elevators of the palate acted and drew the palate up, but the traumatized palate was too short to close the nasopharyngeal opening. The superior constrictors closed in at the side and served to take the place of the destroyed pillars. He thought that possibly one could produce a palate, not of the great length which the operators now attempt to get, but a shorter palate higher up, and without destruction of the raising function of the palatal elevators, and then through training bring these constrictor muscles to fill in at the sides what the palate could not accomplish. While that would not produce a perfect voice, there was hope that it would produce a better voice than often results by the present procedure. The cause of extreme nasality was the large relative proportion of space for the air to go through the nose as compared with that for the mouth. If a process could be brought about whereby the space for the air to go out of the nose was small and out of the mouth was markedly large, that was in many cases all one could hope to accomplish; and this would be encouraged by building the palate up as near the roof of the mouth as possible.

Dr. Kenyon expressed his appreciation to Dr. Swift for his coming to Chicago to address the society, and also for his work in connection with speech defects in the public schools of various cities.

DR. ROBERT SONNENSCHN said the fact that the study and appreciation of voice defects required a highly trained man in every sense was demonstrated to him during the course he had the privilege of taking in Berlin, in 1910, under Professor Gutzmann. In this field were combined the qualities of the neurologist, the physiologist and the laryngologist. He wanted to learn in a general way what he could in order to appreciate the difficulties they have to contend with. He thought we were fortunate in having in this city a man like Dr. Kenyon and in the East a man like Dr. Swift, who had undertaken the treatment of these diseases. It had seemed a pity to him that so many of his colleagues had neglected the study of these cases, and the reference of them to men who could treat them properly, but had left them to the mercy of the advertising charlatans, who could not get proper results, as they did not treat the patients scientifically.

With reference to the cases Dr. Kenyon mentioned, he wondered if Eckstein of Berlin, with whom he had a little paraffin work, would not advise that method. He had had good results with paraffin—the hard paraffin which melts at or above 52° C. The great objection to these operations had been the embolism which had occurred, oftentimes with complete blindness of the retina, but this had occurred with the soft paraffin. The hard paraffin had practically never caused amaurosis. He had seen Eckstein inject a mass of paraffin in these cases where there was lack of proper functioning of the palate. This permitted a contact of the soft palate and greatly improved the voice. This was a simple procedure with the paraffin melted and injected. The paraffin hardened almost immediately and the cases he saw in the clinic seemed to functionate very well.

DR. H. L. POLLOCK said in reference to what Dr. Sonnenschein had stated that they had seen many of those palates. One case was that of a woman who had been operated and wanted to have her voice corrected. They followed the procedure of injecting paraffin and obtained an almost perfect voice. The palate was short and stiff, as was often the case, and the principal difficulty was in getting the proper amount of paraffin. It was almost like injecting it into the septum. They injected a little and in a few days a little more; there was less and less reaction with each injection, and finally the voice became almost perfect. In subsequent operations they had not obtained as good results, but in the case of short palates it did improve the voice materially. If the palate would not move towards the pharyngeal wall this procedure would bring the wall toward the palate, and he thought it was the only thing that could be done after the cases had been operated.

Another thing was the matter of training these individuals' voices properly. In nearly all cleft palate cases where there was a nasal twang the patient seemed to be unconscious of this. The patient would repeat what was told him and repeat it with a nasal twang, and think he was saying it properly. In one case, a young man of twenty-one, who had had several operations and all but a very small opening was closed, there was a distinct nasal twang of which the patient seemed to be entirely unaware. They procured a phonograph record and

had him read a poem into it and then had him listen to the record, and he could not recognize his voice. These patients were under the impression that they were speaking as distinctly as anyone, and this young man thought he was speaking correctly until he heard the reproduction of his voice in the phonograph.

DR. ARTHUR M. CORWIN thought that with the exception of Dr. Kenyon, the members in general knew very little about the subject of these excellent papers. Dr. Kenyon had given it careful, intensive study, and this was bearing fruit out of the years. One peculiar thing was that he trained a great many of the little defectives, who were not necessarily anatomically defectives but "habit defectives," and in order to train them he had to bring into play in an intensive way his own articulation, and in the course of a few years he (Dr. Corwin) had noticed an immense progress in his (Dr. Kenyon's) use of his lips and palate and tongue, in the clearness of his enunciation, and that was one of the reactions that a teacher-student would always get.

Since the first of January, Dr. Corwin had been giving his services once a week for twenty-five weeks to the Y. M. C. A. in Oak Park as a director of public speaking (although he had never done anything like this before in his life). There were thirty-five men in the class, ranging from fifty-five to eighteen, business men, salesmen of insurance and real estate, physicians, lawyers, etc. Several of them had speech defects, some had a nasal twang. These men got up and made their two minute speeches, and then Dr. Corwin criticised them, and it was astonishing to see the progress those men had made in six or seven sessions, not only in handling themselves, but in the art of expression. Sometimes he took certain men aside and gave them special suggestions and criticisms.

He believed people with speech defects should be watched for and referred to the men who could give them the necessary training in the most scientific way.

DR. D. P. MACMILLAN, director of Child Study of the Chicago Public Schools, said that he had been following the work of Dr. Swift very closely for the last two years, and had been very much interested in the undertaking that was going on in Cleveland. They had endeavored to get some such measure

inaugurated in Chicago. At present there were only eleven teachers, were devoted their time to the correction of minor speech defects. The problem cases went to him for advice, and he "parceled them out," provided he could not give them individual attention. To give such individual attention to two hundred and forty or two hundred and forty-five a year, as well as to see forty-four hundred or forty-five hundred other kinds of defects meant that a great deal of intensive work must be done by some agency. He would like to have an organization especially correlated with what is already being done to look after that work, and he believed it was necessary to do this in order to take care of the great number of speech defects among children. This was particularly true because they do not go back and attack the defects early and establish some form of treatment that would prevent or cure them.

The problem of cleft palate under discussion was a minor one for his department—that was work for the pathologist. When a child came to the attention of the department that was mentally subnormal as well as defective in speech, they found it best to refer him directly to a pathologist for treatment as well as to the teacher of correctional speech. The work of caring for the speech defects as it now obtains was defective in many ways, but he was not able in the time allotted, even though it were wise so to do, to detail all the shortcomings. As a matter of plain fact, it was essential to have a movement promoted for the correction of speech among normal people who were supposed to have correct speech. It was eminently necessary to have training in voice control and in public speaking. However, it should be remembered that the number of cases associated with nervous disorders was great, 67 per cent among twenty-seven hundred investigated, which raised the larger question of the intimate relation of these speech defects to general constitutional and neural disorders. Should this work be associated with the correction of speech among deaf pupils? He did not know the attitude of the Cleveland people upon this subject, and asked whether the scheme there was so extensive as to take in the speech defects of the deaf and of all pupils from six to eighteen. Also what was meant by a "part time" teacher to which reference was made? He challenged the implication of Dr. Swift's scheme

that it was the early direction of attention to speech defects in and of themselves that was most effective. In some ways the best work in speech control at the present time seemed to be pointed in the line of intensive training for the correction of aural imagery. That raised the question as to whether the time to start the correction of speech was not pretty well pointed out. In Chicago there was great difficulty in getting people to accept any program outlined, particularly in regard to all specialties. Seven or eight years ago a committee came out from New York and became excited about the need for classes for backward children. They accepted a scheme there and it went through, but in Chicago it was partly turned down. They were very slow here to take up the expenditure of money for the inauguration of our present scheme for the correction of speech defects. He hoped that there would eventually be some organization that would cope with the problem of speech correction in its widest sense early in the career of the school child.

DR. SWIFT (closing) expressed his admiration for the splendid paper of Dr. Case. He had noticed one constant and peculiar thing about the cleft palate cases, and that was that a great many of the speech defects occurring in these cases had nothing to do with the cleft palate. He believed that one-half to two-thirds of the faulty speech was entirely outside of the cleft palate etiologically.

He was interested in Dr. Corwin's remarks concerning the improvement in those who trained other voices. When a teacher took a class and trained it her speech and enunciation became much clearer and more distinct and easy than it ever was before, and this also had a direct influence on the members of the class. One of Dr. Swift's teachers who was an assistant in a kindergarten class, where there was no speech correction, said that the supervisor of music found that this class was the only class where she could understand the words the children sang. The Y. M. C. A. was prone to have classes in speech correction, and he considered that a very unfavorable criticism on the academic method of the past and present. Men should not have to be taught how to talk after finishing their school. Speech and its functions was one of the most important things for grown up individuals to have a mastery

of. Many men had plans and thoughts that they would like to get up and talk about in meetings, but they lacked the ability to do it. He thought suggestion was largely to blame for this. When in Harvard, his functions had been largely hearing and writing functions; for four years he was trained to listen and write the thing down quickly and think very little about it. The brain areas used in making that type of individual forced a tremendous development of those areas, but now he did not use them, and he believed he should have been developed into a listening, thinking and talking type of individual.

He was glad that Dr. MacMillan appreciated the need for those things; the feeling of the need for prevention was the most important thing in speech correction. No medical efforts were right unless there was some work instituted along the line of prevention. He had a great fight to put prevention into the Cleveland schools but finally succeeded.

As to referring cases to a pathologist, he understood this to mean that all cases should first be diagnosed by a medical individual and then handed over to the proper teacher. The Cleveland teachers were sufficiently trained to make some of the diagnoses themselves, so they preferred to have the cases go first to the teacher and then to the pathologist if necessary. They had not done anything with the deaf in the public schools. The "part time" teacher was a grade teacher who could keep on with her usual work and devote part of her time to speech correction.

They considered that the kinesthetic approach should come first and this followed up by the development of the acoustic element. Then the visual areas should be brought in and educated to control the speech output, so that when the visual processes were fully developed both of the others were relegated to the unconscious, so that most of the things in the mind of the person when he was talking was the visual element. Some made merely the kinesthetic approach, and some merely the acoustic, and very few the visual.

He agreed that speech correction was very hard to get into the public schools, but thought the wave of Americanism that was sweeping the country might bring it.