SOCIETIES' PROCEEDINGS.

PROCEEDINGS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

Niagara Falls, Canada, June 1, 2, 3, 1915.

(*Continued from Vol.* XXXI, *p.* 526.)

Tonsillectomy in the Adult.—Are we justified in doing so many indiscriminate Tonsillectomies for Remote Infection?—Charles W. Richardson.—The paper deals with the ingrained feeling in the profession that the tonsils are probably the sole focal source of general infection. This view has extended not only into the general profession, but has also become an obsession of the laity, so that there are a great many cases of tonsillectomy which are operated upon, in all probability, with an imperfect study of the cases, and the want of proper realisation of the relation of cause and effect.

He also calls attention to the number of other focal sources of general infection. He stated that there was no question of the necessity of tonsillectomy in a certain class of cases, where there was decided pre-existing or present evidence of local disease. He doubted whether there was any necessity of removing the tonsils, except in unusual cases where there was no evidence of disease or tenderness or hypertrophy, wherein there was general infection, simply for the purpose of correcting such a condition. Dr. Richardson also disapproved of the removal of tonsils where there was simply the history of a previously existing case of tonsillitis preceding general infection, and where the tonsils seemed absolutely normal at subsequent inspections. A number of cases were given to bear out these contentions.

Dr. Henry L. Swain: The ideal way is for the general practitioner to send patients to us to ask if the tonsils should be removed, but most of us are confronted with the exactly opposite condition. The nurse, the relatives, or others will send a patient to the hospital "to have the tonsils removed." Some tonsils certainly do not need to be removed. Tonsillectomy is undoubtedly performed in many cases in which it is not needed. That is wrong. Any method which will lead to some way of estimating quickly and accurately as to whether a tonsil should or should not come out would be of tremendous advantage.

Dr. G. Hudson Makuen: I have had several letters from Dr. French concerning his work. He promises to bring this subject before us at our next meeting in Washington. He is now able to tell whether or not a tonsil is diseased. He thinks he will be able to look in the mouth and tell whether or not pus or detritus of any sort is there, and whether or not it should be removed. It is not a question of whether or not the tonsil should be removed, but what should be done; it is a question of the prevention of the trouble, just as the prevention of sinusitis is advocated. The cases of which I am proudest are those in which I have done the least operation. When pus is found in the crypt it is possible to cauterise the edges of the crypt, to open and drain, without trying to do an extracapsular, or intracapsular or any other kind of an operation for tonsillectomy. Some of these cases are inoperable, and it is far better to

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give good drainage and to remove the possibility of infection. I think that can be done in a great many cases, and radical surgery thus be avoided.

Dr. WILLIAM E. CASSELBERRY: I cannot say that I feel thoroughly in sympathy with the point of view presented. It goes without saying that we should not remove tonsils which we are sure are healthy and which will not give rise to systemic infection. It goes equally without saying that we should remove those which are harmful. I am unable to assure the internist that the tonsils are not the source of systemic infection, even after I have evulsed the pillars and have explored every repository of infection, because the tonsil is a sponge, and may be still the source of infection after such exploration. Many times when the internist sends us a patient for examination of the tonsil, and we find no infection there, we should look elsewhere for the source of the trouble; we should look above. There are ten cavities just above. Sinus suppuration is exceedingly common, and is not infrequently the primary source of infection in the tonsil itself. If we remove the tonsil we are still not sure that we have removed the source of infection. Our duty to the internist is to find the source of infection if it is not in the tonsil.

Dr. THOMAS HUBBARD: Dr. Casselberry's remarks about finding the source of infection applies to the teeth. Given a case of some form of systemic infection, probably of focal origin, it will be our first duty to prove that the tonsil is or is not diseased, and then to find the real source. The method followed is extremely interesting. Dr. Price of Cleveland is able to study the condition of the peridental tissues, and, by culture of the various bacteria obtained, to tell the influence upon the system. In this way he has been able to exclude certain teeth and to find the diseased root which is the source of the active organism. In doubtful cases, where there is objection to operation, we should be able, by some such method, to tell whether the tonsil is the source of infection.

Dr. HANAU W. LOEB: It is easy enough to exclude the teeth, or pyorrhea, or a small abscess at the roots; but it is not easy to tell when the tonsil is at fault. In a case of rheumatoid arthritis, getting worse for one, two, or three years, in which repeated examination revealed nothing and in which the tonsils are not specially large, would you leave those tonsils? I have recently had such a case of rheumatoid arthritis, examined by various internists without result. I removed the tonsils, made a vaccine after the method of Rosenau, used it, and the patient got better immediately. Because the danger of increasing the pathologic process by a single attack of mild tonsillitis is so great, I think we are justified in removing the tonsils, providing, of course, the age and the general condition of the patient permit. While we should not remove tonsils indiscriminately, in the presence of disease which cannot be otherwise located we are justified in removing them. The appendix and the tonsil are very closely related as to structure. The fact that removal of the appendix was followed by cure of the rheumatoid arthritis does not necessarily mean that the tonsils should not be removed.

Dr. JAMES E. LOGAN: Nothing has been said of one source of infection which to my mind is very important—the vault of the pharynx. I think many infections come from failure to appreciate a condition in the vault of the pharynx which is there by reason of neglect of inflamed or degenerated adenoid tissue, possibly a constant source of irritation. If we will clear out these vaults, clean out this adenomatous, fibroid or lymphoid tissue, we will get rid of many cases of systemic infection.

Dr. GEORGE E. SHAMBAUGH: The word indiscriminate would exclude

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all discussion, because no one believes in removing tonsils indiscriminately. However, the whole subject of removing tonsils for systemic infection is very important. The question of focal infection in systemic disease is much better appreciated by internists than by specialists. One of the most important chapters in medicine is the relationship of focal infection to systemic disease. Not only these rheumatic conditions, but Bright's disease, chronic neuritis, enlargement of the thyroid, appendicitis, have been traced definitely to tonsillar infection. At the Presbyterian Hospital, in Chicago, where most of this work has been done, it has been found that there is a distinct relationship between appendicitis and tonsillitis. Duodenal ulcer, also, often results from focal infection. It is not always the tonsil, however, that is the source of the focal infection. Pus taken from focal infection anywhere else, injected into a guinea pig, will produce gastric ulcer. The infection is produced through some selective action. We are now merely on the threshold of this entire subject. These questions should not be worked out in an isolated way, by dentist, by nose and throat specialists, or others, but by all together.

The question is, how accurately can we tell when the tonsil is at fault? My opinion is that in most cases we can tell pretty accurately. One way of telling is by the history. If a patient has had an attack of rheumatism following an attack of tonsillitis, there is good reason to believe there is an association between the two. I would not take the risk of another attack of tonsillitis in a case of endocarditis. Many patients deny having had sore throat, and in many cases it is possible to find pus in the tonsils of patients who have never had tonsillitis. If we are not able to demonstrate any positive evidence of the tonsil being the source of infection, can we exclude the possibility of its being so? Before removing the tonsils in such cases I want a capable internist to go over the case; if he cannot find any focus, the tonsil is the most suspicious source. I may cite an illustrative case. A woman, of perhaps fifty years of age, consulted me two and a half years ago, saying, "I have neuritis in my right arm; I want you to take my tonsils out." I asked her why she thought she had tonsillitis. "Some of my neighbours," she said, "have rheumatism, have had their tonsils taken out, and are better." She was under the care of Dr. Billings, and I sent her back to him. She came back after a week, saying he said, "Take the tonsils out." I could express nothing from the tonsils. In removing one of the tonsils I opened an abscess. The patient got well of the neuritis. Another case in point was that of a physician who had had rheumatic fever for several years, an attack every year. He had had five attacks of tonsillitis. The internist could find no other source of infection. The man was seventy-one years old, and did not want to have his tonsils removed. He continued to have the attacks of rheumatic fever. I finally took out his tonsils but he was not improved. It was then found out that he had a urethral abscess; treatment of this cured the rheumatism.

Dr. Otto T. Freer: Why should the internist be the one to make these examinations? He can examine the chest, the abdomen, etc., but he is not the one to examine the nostrils. There has been a slaughter of the innocent in this matter, with the general practitioner taking out tonsils. I agree that the tonsil is apt to be the source of infection, but the pharyngeal tonsil, as Dr. Logan has said, is more often the source of the trouble than the faucial tonsil. The lymphatics usually tell the story of focal infection. If I find no lymphatics involved, I am not inclined to consider the tonsil the cause of the infection.

Dr. Shambaugh: The internist is the one to help the patient to get

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the problem threshed out. Glandular infection has nothing to do with systemic infection.

Dr. GREENFIELD SLUDER: It seems to me that there are two problems the solution of which will eventually clear up the question: first, the physiology of the tonsil; second, the perfection of Dr. French's work. The tonsil takes up what is put upon its surface very readily; this is quickly absorbed, and is thrown into the system beyond the tonsil.

Dr. RICHARDSON, closing the discussion: After giving the title of this paper to the secretary last winter I was sorry several times that I had done so, because the more I thought of it the more I realised how difficult it would be to discuss the subject without incurring the ill-will of one faction or another. Dr. Casselbury agreed with me most thoroughly, without intending to do so. I am glad that Dr. French's work bids fair to solve the problem. Dr. Shambaugh has emphasised one point that I tried to bring out—that there are other points of focal infection besides the tonsil. It is our duty to be able to elicit these for the internist. Dr. Logan has called attention to the fact that there may be crypts in the pharyngeal tonsil which are as much diseased as the crypts in the faucial tonsil, and which are as apt to cause systemic infection. I recall a case, sent me by an internist, in which the patient asked me to look in her right ear. I did so, and found a chronic suppuration, which she said began when she was fourteen years old, following scarlet fever. She was then twenty-six. She had beginning rheumatoid arthritis, I did a radical operation on the ear, but did not touch the tonsils. She is well and working. We must conscientiously go into these cases, examine the ears, the sinuses, the vault of the pharnyx, the teeth, and note whether these will help us in the study. It is not only rheumatoid arthritis, but all the other forms of infection, that may be due to these focal lesions. In cases which cannot be made out thoroughly, even if the tonsils do seem to be infected, one must be on the look out for syphilis and latent tuberculosis.

Effects of Protein Extracts from Fruits and Pollen on the Upper Air Tract—Walter F. Chappell (New York City).—The writer has recognised for some years that some people suffered from a variety of local irritations of the mucous membrane of the upper air tract and external auditory canal, which were attributable to eating certain fruits or drinking certain wines.

In the early summer cases of pharyngitis and laryngitis were classed as strawberry throats; in the autumn as cider and grape throats, and an occasional tomato throat. In addition, pain, tenderness, and swelling of the external auditory canal were traceable to eating apples and drinking cider. Occasionally an acute sneezing, accompanied by discharge and swelling of the mucous membrane of the nasal passages, followed eating quantities of grapes or drinking claret or similar red wines. In a few instances these symptoms were attended by swelling and burning sensations of the tongue and lips. There are children who have stuffy noses, constant colds, pharyngitis, and croup, due to the nature of the food they take. Raw apples cause the greatest trouble, but when one is anaphylactic to one fruit he may be to several others. Cooking these fruits greatly modifies their effect, but even then, if taken in large quantities and continued for some time, they still produce irritations of a milder degree. Believing that the protein extracts of fruits might be the cause of these conditions, protein extracts of apple, strawberry, grape fruit, and tomato

https://doi.org/10.1017/S175514630001684X Published online by Cambridge University Press

were made for the writer, and applied to five people known to be anaphylactic to apples, strawberries, and to tomatoes, while a sixth person was used as control. Terrific reaction followed the injection of one minim subcutaneously of apple protein extract of a 1 to 60,000 strength, with a drop on a small abraded surface. Local reaction occurred only in the second case, as also in the third case. Severe reaction followed the local application of the strawberry protein in the fourth case, and only some redness followed the intracutaneous injection of the tomato extract in the fifth case. In hay fever cases the writer has seen much benefit follow the internal administration of cinchonidia sulphat, but he has seen no permanent cures following this treatment.

Pollen Therapy in Hay Fever.—J. L. Goodale.—Methods of gathering plant pollens are discussed. A 14 per cent. solution of alcohol was found to preserve the pollen extract for several months. When hay fever patients receive an application of the exciting pollen to a scratch of the skin, a definite reaction occurs, consisting of œdema, hyperemia, and itching. The application of this test enables us to determine the special causative plants for each case. The intensity of these skin manifestations may be sensibly diminished by the repeated parenteral administration of the proteids in question. Coincident with the diminution in skin reaction there seems to occur an increased tolerance of the exposed mucous membrane to the pollens of the plants employed. Pollen therapy in hay fever may be regarded at the present time as a promising method of treatment, but its value and the permanence of its results remain still to be definitely established. Serobiologic methods have shown the phylogenetic relationship of the different plant orders and families. The application of these discoveries to the treatment of hay fever by injection of plant proteids promises to assist in the selection of the specific material required for a given case.

Dr. Burt R. Shurley: I have been extremely interested in the working out of the question of sensitisation to the pollens of ragweed and goldenrod, which are the only pollens I have been able to secure. The whole questisn of anaphylaxis and sensitisation has been explained by Vaughan, of Ann Arbor, by the splitting of the proteids and the elaboration of toxins, ptomaine, and leucomains. His theory is very rational. He has shown that egg-white will kill a guinea-pig in a short time. A toxic dose after the ninth day is fatal. A number of Dr. Goodale's observations I have been able to confirm as I have worked along. If the dosage is run too high the depression is great, resulting, perhaps, from the exhilaration of the toxin. One laboratory has turned out, from the clinical standpoint, practically all the pollen toxins which can be used in hay fever. Fifteen doses, in ascending scale, may be found in the market. The clinical value of this I do not know, but it is claimed that 50 per cent. of hay fever patients are absolutely protected during the hay fever season.

Dr. Emil Mayer: The question of standardisation is very important. Standard solutions, not stock solutions, should be employed. Standardisation can be done and must be done, just as is the case with the pharmacopœia, in which a fluid extract represents so many grains. For this reason I resent the rushing in of a chemical firm and the presenting of a stock pollen. The work presented to-day is very gratifying.

Dr. Harmon Smith: The first patient mentioned by Dr. Chappell was a patient of mine, suffering from what I thought was eczema of the external ear, of uric acid origin. Since he was under my care he went to

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Dr. Chappell. He was a large man, of fine physical physique, weighing over 180 lb., and not at all neurotic. When I saw him he had a large welt on the arm, extending around about two-thirds of the arm. He was very sick, giving every evidence of great physical depression. The doctor mentioned in this paper I also knew very well. His reaction from the strawberry, I am sure, was produced absolutely by the protein in the fruit.

Dr. MAX A. GOLDSTEIN: These reports convince us that we have been working in the dark for the last few years. Animal proteids, vegetable proteids, and the whole series and ramifications of proteid substances and their anaphylactic reactions will have to be reduced to a system before any practical clinical work will be accomplished in hay fever. Standardisation is necessary for practical purposes. Unless we can reach a more definite and limited basis we will never see the end of this tremendous field. I have in mind the wife of a physician, an internist of standing, who has used calcium salts for the second season, with no practical results as yet.

Dr. GOODALE, closing the discussion: I wish to express my disapproval of the procedure which has been brought forward by the chemical firm, of what might be called a shotgun prescription for hay fever. As I understand it, it is to be used in the majority of cases of hay fever. It s possible that in a patient with one sensitisation, by injecting this stock product another sensitisation may be given.

Fluoroscopic Bronchoscopy (Supplemental Report).—E. Fletcher Ingals.—The fluoroscope is of much value in the hands of the well qualified bronchoscopist. Its use will lessen the danger and decrease the number of falures where its use is indicated. It is of especial value where there is so much mucus, pus, or blood that it is very difficult or impossible to see the foreign body, or where granulation tissue covers the foreign body; where there is an abscess cavity in which the foreign body is hidden; where a stricture has formed, and in difficult cases in which the body is lodged in a bronchus going to the upper lobe of the lung, or in any bronchus where it cannot be exposed by the ordinary methods. It is better not to use any anæsthetic, and a narrow, strong forceps that will hold is especially important. The surgeon, standing at the left side of the patient's head and holding the bronchoscope, which was previously introduced, to the foreign body, directs it by the shadow to the foreign body. The forceps is guided to the foreign body by the shadow, and the blades are opened and the forceps passed a little further so as to grasp the foreign body. Considerable traction may be required to draw the body through the stricture. Two cases are reported to further illustrate the utility of the method.

Foreign Body in the Lung. the Primary Diagnosis of which was made by a Blood Examination—Removal; Recovery—George L. Richards.—Male, aged twenty five, had occasional attacks of asthmatic breathing, bronchitis and chills from some time in early childhood. It struck the writer as being peculiar that a young man should have occasional attacks of chest pain, occasional attacks of chills and fever of very short duration, with only a suggestion of a cough, but with a moderate, steady leucocytosis and with no definite physical signs. It suddenly dawned on the writer that these symptoms were suggestive of a foreign body in the bronchus, and that all the symptoms might be thus occa-

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sioned. A Roentgen examination disclosed a tack in the right bronchus. There is no history as to when the tack entered the lung. Dr. Chevalier Jackson, after administration of morphin and atropin under cocain anæsthesia and with the aid of the upper lobe bronchus forceps, after dela-tation of the strictured bronchus, removed the head of the tack; the point was not forthcoming. The head was much eroded and oxidised. At no time could the tack be seen by direct inspection. No reaction followed, and no chill or other further trouble with the lung has occurred since. Foreign bodies which have been in the lung a long time and are unsuspected are probably far more common than any of us have yet ascertained.

Dr. Robert Clyde Lynch: I have here one of the first changes made in the Killian suspension apparatus. It allows for the movement of the horizontal tooth plate about an inch instead of a quarter of an inch, as with the Killian model. One of the great disadvantages of this was that the platform projected into the mouth, interfering with the view. In order to get rid of these disadvantages I constructed an apparatus which has a vertical movement. It allows the opening of the mouth, with nothing to obstruct the view. The principle was found to be entirely wrong; in other words, the centre of gravity was found to be to the side of the middle, and the head would pull over to one side. This is shown merely as one of the mistakes made in the development of my apparatus. The last improvement so far has served very well under all circumstances to which it has been applied. Most of my dissection work has been done in adults, who require more motion than children. It must be made flexible, and must have motion in excess of what is usually necessary. First of all, the base which supports the tongue spatula is extremely heavy and will not bend under any circumstances. I have suspended patients weighing as much as two hundred and fifty pounds. Again it will open the vertical direction two inches, which is in excess of that given by other methods. It has another motion not obtained before. It also has a separable tooth plate. I now use two tooth plates, which will fit on in this fashion (demonstrating). This has the advantage of giving two points of fixation as against one. When the upper jaw is fixed against these two points it is prevented from moving from side to side. The double ring keeps the instrument in the centre of gravity. In some cases where the patient is under suspension this screw will jam. In order to prevent that I have had a nut drilled and have a little handle which can be used to jack it up, just as you would use an automobile jack. The spatula, which has given a good deal of trouble in keeping the tongue in shape, is constructed in my apparatus much on the pattern of the last Killian model. The wings are flexible; with it the sides of the tongue can be lifted up and kept flat. The handle, in other models, was hard to sterilise, so I have constructed one which is made of hard steel, so that it will not bend under the most trying circumstances. It is rough on the back, so that it will not slip. The point tips up a little, the wings are fixed. It shows the anterior commissure much better than is possible with the older models. The instrument is introduced closed.

Dr. Harmon Smith: Dr. Ingals' method of locating and extracting foreign bodies recalls an unfortunate case which I saw in consultation. The patient, a man, had inhaled a hand dental bur, which consisted of an aluminum handle and bur. The dentist had dropped this instrument on the patient's tongue, turned around to take up another instrument, and during this time the man inhaled the bur. He was advised to have an X-ray taken. He went to a business meeting down town, and afterwards had the X-ray taken. This showed the foreign body in the

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left upper lobe bronchus, high up. He then consulted an expert bronchoscopist, who worked an hour trying to extract the body. He failed. I was then consulted. I worked at it, but could not get into the bronchus. Another laryngologist was called in, who has extracted foreign bodies under similar circumstances, but could not extract this one. Dr. Jackson was telegraphed for, and came bringing his own instruments and assistants. He work an hour or more, but was defeated. It then became necessary to remove a part of the man's lung. He was an old man, and died subsequently from the shock. It was impossible to turn the corner to get the foreign body in the ascending bronchus of the left lobe.

Dr. THOMAS HUBBARD: Dr. Ingals' remarks with reference to the liability of the indiscriminate application of the fluroscopic method of examination are very timely. In a case recently under my observation the method was tried in removing a tack from the right lung. The tube was passed far enough down to reach the tack and turn it over. A skilful fluorscopist was assisting, the operation was prolonged for some time, and every effort made to extract the tack, but it was impacted by the method. It had been turned crosswise and had to be straightened out by a hook. There is always danger to the fluoroscopist in these prolonged operations. The man whom I had has already lost one finger from epithelioma. There is also danger to the patient. Sometimes foreign bodies become encysted. I recall a case in whih a boy swallowed a nail. Several good diagnosticians went over him very carefully, but could not locate the nail. It was finally located by means of the X-ray, and proved to be an eight-penny nail, which was encysted. There were no symptoms from this foreign body. If the patient is conscious, he will often aid in telling whether we have got the foreign body. The finger-thumb action of the forceps is more delicate and positive that the grip with the hand. The action of the the Ingals forceps is too stiff.

Dr. JOHN F. BARNHILL: I would like to ask Dr. Ingals to state his method of watching the end of the fluoroscopic forceps—whether an assistant, the fluoroscopist, or he himself watches the end of the instrument; also whether there is any danger of grasping the lung in getting through a spot where there is an abscess. In the lay press, in all accounts of foreign bodies getting into the lung, the writer always says the patient swallowed a foreign body. Dr. Richards used the same term in his paper. Is it not aspirated or inspired?

Dr. WILLIAM E. CASSELBERRY: I would like to ask Dr. Ingals the arrangement of the table, and whether a specially constructed table is required; also whether the fluoroscope as ordinarily used is adaptable for the purpose.

Dr. ROBERT CLYDE LYNCH: I recall a case in which a nail was in the lower lobe bronchus. I had made a canvas cot, on a trellis, and put the X-ray tube under this, I directed the forceps from two points of view. To be sure I was in the line of the right bronchus, after getting the tube so that it actually touched the nail, the patient was swung over on his side, and an anterolateral view obtained. The nail was extracted without difficulty.

Dr. INGALS (closing the discussion): Dr. Richards spoke of the tack itself coming away piecemeal, or having been oxidized. I had an experience with a much larger nail which had been in a boy's lung for eight years. It appeared two or three times larger than it was. I got nothing but the head; the rest came up as a lot of black fluid. I watch the forceps myself. In operating from the head of the patient I can look

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over and see. You cannot do this with someone to direct you how to move it. It is on account of puncturing the lung that I caution gentleness. If you use enough force you can easily puncture the lung, but it is not at all necessary. I understand perfectly the danger of prolonged fluoroscopy, and that is why I said one should always have an expert fluoroscopist. The light should not be turned on more than a half minute at a time. The operation should certainly not be prolonged excessively, I used specially arranged tables so that the light can be placed wherever I want it. Sometimes it is necessary to have a simple board made which raises the ordinary table found in the hospitals. This method should not be employed whenever a patient has a foreign body in the lungs; it should be the last resort. The foreign body should be found and removed by other methods, if possible. When the operation can be done under inspection it is much better. Where there is a stricture which is difficult to dilate, this may fail. Dilatation of a stricture is difficult. It may not be necessary, as it will sometimes dilate as you work if you can get the forceps through. It would not take more than two or three minutes to get through a stricture. When the foreign body is high up in the lung it is difficult to see it. That can be helped a good deal by position. If the patient's head is turned to the side and the direct bronchoscope toward the middle, you can see the upper branch of the bronchus.

Dr. Richards (closing the discussion): The question arises in connection with these foreign bodies, how long and how much we are justified in searching for them? Dr. Smith's case calls to mind a case in which an attempt was made to remove a small gold pin of the safety pin variety. The patient was a young woman. Killian, before a committee of medical men, worked for an hour or more and failed. Later in the same summer Dr. Jackson tried to remove the same gold pin at the Rhode Island Hospital. He worked about an hour and a half, and gave it up. The girl went into the hospital as a patient, remained as a pupil nurse, has been there for two and a half years, and has never had any pain from that pin. It is a question sometimes whether we should not wait for more definite symptomatology. I think in Dr. Smith's case if they had waited the man might be alive to-day.

Dr. Smith (continuing the discussion): It was advised to wait in the case which I mentioned. The majority of the consultants wanted to wait, but Dr. Jackson said pneumonia might result. The matter was put up to the family, and they said operate by all means. The man was in such a nervous state it was thought he would die anyway. The head was bent over as far as the man's neck would allow, and it was determined that tracheotomy would offer no further aid. Dr. Jackson had recently read a paper in Brooklyn on the limitations of bronchoscopy. One week previous to that he had used similar instruments and had removed successfully a body which had gone down to the lower instead of the upper bronchus.

Dr. Ingals (continuing the discussion): As to the duration of the operation, one might well adopt the rule that one hour should be the limit. Ordinarily a half hour is sufficient. If the patient is in good condition one may keep on for an hour, and then try again some other day. It is better to let the patient live with the foreign body in than to keep on too long. Many patients live for eight or ten years with foreign bodies in their lungs. It is better to wait and give the patient a chance The probabilities are that a foreign body in the upper lobe will settle down to where it can be more easily reached.

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The Sympathetic Syndrome of Sphenopalatine (Nasal) Ganglion Neurosis, Together With a Consideration of the Neuralgia Syndrome, and Their Treatment.—Greenfield Sluder.—Dr, Sluder reviewed his observations on the nasal ganglion which were summarised in his text "Etiology, Diagnosis, Prognosis and treatment of Sphenopalatine Ganglion Neuralgia" (Transactions, Section Oto-Laryngology, American Medical Association, 1913). One point only was added to this text, namely, the very great difficulty incurred sometimes in effecting a cure of that neuralgia is explained by the fact that hyperplastic sphenoiditis underlies the disorder and may frequently be overlooked because the picture in the nose is not very striking, and that the pain is very much of the time a pure ganglionic neuralgia. Such cases require careful selection to decide whether they be injected or take the Hajek postethmoidal radical operation. To the already described picture he added the "Sympathetic Syndrome," which in its fullest development is characterised by great sneezing, watery discharge and swelling of the nose within and without (rosacea), with profuse lacrimation, reddening and swelling of the lids, dilatation of the pupils with the appearance of slight exophthalmos (staring), a sense of itching and burning, or a feeling of wind blowing into them, together with a peculiar sense of discomfort, which seems independant of secretions or congestion; and more or less photophobia, sometimes very great. In addition to these symptoms, there is sometimes dyspnea with dry râles. He found that cocainisation of the nasal ganglion relieved this sypmtom complex. He observed furthermore that it was often subdivided, sometimes being merely the sneezing, sometimes red nose (rosacea), sometimes secretions, lacrimation, and photophobia, He stated that many of the ordinary coryzas are of this type, which of course are to be differentiated from affections of the membrane leading to suppurations of the sinus. He recommended the same treatment as previously given for the neuralgia syndrome. He offered a probable explanation based on anatomic and physiologic facts. Anatomically, the fibres of the cervical sympathetic from the nasal ganglion pass downward by way of the Vidian and carotid plexus to the cervical nerves and to the the lower cervical ganglion, which is often fused with the first thoracic. These ganglia are anatomically allied to the nerves which, in addition to supplying the neck, also make up the brachial plexus and supply the upper extremity. Accelerator fibers for the heart and vasomotor fibres for the lung also pass through these ganglia. He felt that it was a lesion of the sympathetic elements of the nasal ganglion which explains not only these vasomotor secretory phenomena, but also the pain referred into the neck, shoulders, arm, etc., as Vidian neuralgia, and that it came to pass by virtue of the sympathetic fibres which aborize about the cells of the spinal ganglia of the nerves which make the supply of the neck and upper extremity. He also offered as explanation of nasal asthma the fact that accelerator fibres for the heart and vasomotor fibres for the lungs pass through the lower cervical and first thoracic ganglia, through which also pass the cervical sympathetic fibres, and suggested that the pain of angina pectoris might be explained by sympathetic impulses arising in the heart passing upwards through the above mentioned ganglia, which are in association with the brachial plexus. He found that the pain of glaucoma, iritis, corneal ulcer, keratitis, and conjunctivitis was controlled by anæsthesia of the nasal ganglion, and that it was a nerve blocking process. He thought that it was the sympathetic that transmitted the "heavy pain" from these lesions which went into the occiput and the neck, and found that the course of some of these

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diseases was benefited by the control of the pain, and wondered if some tropic influence were not also exerted through these paths, He had at times succeeded in stopping the râles by cocainisation of the nasal ganglion on the same side on which the nasal ganglion was cocainised in some cases of asthma of not too great severity.

Dr. HARRIS P. MOSHER: I think Dr. Sluder will remember that in a conversation some years ago I made the remark that somebody, some day, would do something with Meckel's ganglion, and straighten us out about hay fever. I have been waiting for someone to do this. Dr. Sluder has done it, and I congratulate him upon that achievement. Two years ago Dr. Mathews, of the Mayo Clinic, came to Boston and said he had been having great success in curing headache due to closure of the frontal ostium, and had cured hay fever by the cauterisation of the two sides of the middle turbinal. I doubted that this was as he said it was; I did not adopt the procedure. He came back to Boston and I asked him about it; he said he had been curing frontal headache, asthma, and hay fever. After two years of knowlege of that procedure I began to try it in the clinic at the Massachusetts General Hospital. Cauterisation of the outer and inner surfaces of the middle, followed by the application of adrenalin, was successful. I could not see then how it worked; I do see now, thanks to Dr Sluder.

Dr. SLUDER, closing the discussion: Answering the question asked by Dr. Freer, as to where I make the injection in order to get at the nasal ganglion: The sphenopalatine forearm is situated immediately posterior to the posterior tip of the middle turbinal, and absolutely never varies. It is at that point that I make the application. In this kind of cocainisation I prefer to take the slightly curved applicator and curl around. For total cocainisation of the ganglion I prefer to slip the applicator under the point and approach it thus. It takes a tiny bit of cocain, and the applicator under the turbinate can be left in place. For operative purposes I leave it under the tip. For the sympathetic acute syndrome I simply paint it, and paint again if neceesary. It is astonishing to see the effect of the cocain. I use a saturated solution of cocain, by preference the large crystals. The large crystal is freer from poison than the rest. A poison is left in the mother liquor. The small crystals come out first and then the big ones, which are freer from poison. The ganglion is almost submucous in many skulls. With the Holmes pharyngoscope I can see how I am going. I prefer a straight needle under the tip.

Report of Progress of a Case of Pituitary Tumour Reported in 1914.—T. H. Halsted.—At the last meeting of this society I reported a case of cyst of the hypophysis occurring in an Italian girl, nine years of age, upon whom I operated, following the method of Hirsch, doing the operation in three stages under cocain anaesthesia. This child came under my observation for the first time on February 6, 1914, fifteen months ago, at which time she presented briefly the following symptoms: She was very large for her age, marked and increasing adiposity; skin was dry and harsh; hair dry and coarse, growing low on the forehead; eyes large, pupils dilated; marked general ataxia with intention tremor, choreiform movements; well marked athetosis; paralysis of the pupil; deep and superficial reflexes not altered. There was extreme difficulty in making coordinated movements, gait was unsteady, complained of frequent dizzy spells, headaches were very severe nearly every other night, and the sight was decidedly impaired. She was unusually bright mentally. An X-ray showed the sella turcica to be somewhat larger,

https://doi.org/10.1017/S175514630001684X Published online by Cambridge University Press

than the average normal at this age, while above and posterior to the sella the brain area was of lessened density. All the operative work was under five per cent cocain with 1-2000 adrenalin, and was done in three stages, the last stage consisting in incising the tumour, which proved to be a cyst, liberating about one half-an ounce of clear, limpid straw coloured fluid, and was followed by quite a decided change in the symptoms.

The child recovered from these operations, finally being taken to her home in a neighbouring village three months after the last operation, on the whole not improved by her surgical experience, the cyst having evidently refilled. The parents declined further operation, and I have seen her only two or three times, as I have gone out to see her at her home. Pituitrin was given her for several months, but for six months she has been without it. Her present condition is as follows: Child is now ten years of age and is confined constantly to bed. Muscular weakness is so great that she cannot walk unaided, and to assume the upright position must be literally held or propped up. She can sit up in an arm chair or rocker with arm and head supports. There has been an enormous increase in adiposity, the fat being distributed throughout the body, while her head has increased to a size that for her age is almost huge. Comparing the measurements of her head with that of two sisters one a year older and one a year younger, it is found that the measurement of the circumference on a level with the parietal eminences is in the older child twenty-one inches, the younger, twenty and three-fifths inches, while the patient's head measures twenty-five inches. The vertical measurement of the circumference under the chin, back of the ears, taking in the parietal eminences, is for the older child twenty-three inches, the younger, twenty-three and one-half inches, while the patient's measurement is twenty-six and one-half inches in this circumference. While the patient's head was larger than normal at the time of operations fifteen months ago, the increase in size since that time has been most striking. The colour of the hair is a very dark brown, it has not increased in coarseness, and the tendency to become reddish, as a year ago, has ceased. There is a marked tendency to somnolence most of the time, the child sleeping a great deal during the day as well as night, although for some days and for a week or two at a time this may not be the case. She is unable to feed herself because of the incoordinated movements and the lack of muscular strength. Intention tremor is very marked. She cannot wipe her face because of the tremor nor approximate the finger tips; on attempting to stand alone the foot is drawn inward and upward, in the position the foot would assume in standing on the outside of the foot. She is unable to hold her head up unaided, apparently due to lack of muscular strength. The cranial nerves are apparently normal excepting the optic. Reaction to light is much impaired. Pupils are not widely dilated. She can distinguish fingers at six feet. The motor nerves all functionate, but are weak. She can distinguish heat and cold. Reflexes are exaggerated. Babinski is marked. There is apparently no great increase in the amount of urine, though it is frequently passed involuntarily. Stools the same. Speech is difficult and thick. Memory does not appear to be very greatly impaired. For instance, she asked by name after many of the patients and nurses she had not seen in fifteen months. On examination of the nose it is found that the base of the sella, covered by the mucous membrane, is freely seen, the anterior wall of the sphenoid being absent. It would be a very simple matter to reincise the tumour if the parents.

https://doi.org/10.1017/S175514630001684X Published online by Cambridge University Press

consent were granted, or if it seemed advisable to do so. I have not urged an operation because of the almost certainty that the cyst would soon fill. The accompanying photograph gives a very clear picture of the child's general appearance.

Dr. JOHN F. BARNHILL: I have employed the Cushing method, using the Cushing retractors. After the parts are dilated the septum can be taken away for the purpose of getting at the anterior wall of the sphenoidal sinus. After that the nose can be dilated as much as needed. This gives a clear-cut view of the field. The Cushing retractor and dilator are absolutely necessary. The speculum itself is built very much like the old Marion Sims bivalve speculum. The operator is not hindered by any hands being in the way. The method is very commendable.

Dr. HALSTED: I have never seen the Cushing operation, so I cannot compare the two. The method which I employed involves a little operation which West originally did, and to which Coffin called attention—that is, doing the submucous and going on up to the rostrum of the sphenoid. In the second operation the posterior end of the septum was taken off completely, mucous membrane and all. That gave a tremendous field. The advantage of this method over Cushing's is that it can be done under local anæsthesia, in two or three stages, and one gets as good view as is necessary.

Tumour of the Pharynx Eventually Terminating in Sarcoma.—Ralph Butler—A healthy married woman aged twenty-one developed a series of pharyngeal tumours which were apparently cured four times in the course of two years. The first attack yielded to inunctions and protiodid of mercury. An almost fatal attack was relieved by iodide of potassium, mercury and neosalvarsan. In two other recurrences, the X-ray treatment was used in addition to the mercury, iodide of potassium and neosalvarsan. The Wassermann reaction was weakly positive at first, and the luetin reaction was positive. The first microscopic examination suggested syphilis, the second, small round-cell sarcoma. The autopsy showed small round-cell sarcoma with beginning metastasis.

Dr. GEORGE L. RICHARDS: A certain number of sarcomas of the upper air tract seem to spontaneously disappear, or to be influenced by remedies which one hardly seems to think would have any curative effect. I recall a case of sarcoma of the right upper jaw, in a woman aged fifty to fifty-five, a boarding-house keeper. The diagnosis of sarcoma of the antrum was made by a laryngologist of ability, and this was confirmed by general surgeons. She was being treated with Coley's fluid when she fell into the hands of a Christian Science healer, and the tumour disappeared. I have seen her four or five times in association with a general surgeon. I have tried to get the opportunity of examining her again, but she is still under the control of the Christian Science healer.

Dr. G. HUDSON MAKUEN: I had the privilege of seeing the patient mentioned by Dr. Butler during the interval of the fourth time that she appeared to be cured. I think no one who was present at that meeting thought of the probability of a return of the trouble. She had nothing in the throat except a considerable amount of scar tissue and the cicatricial contractions, as described by Dr Butler. Her breathing and arti-

https://doi.org/10.1017/S175514630001684X Published online by Cambridge University Press

culation were fairly good. It was a surprise to us all when he reported her death at the following meeting.

Dr. GEORGE A. LELAND: I was called last winter to see an old lady, aged seventy-three, who had enlarged glands in the neck. I made the diagnosis of lymphosarcoma. She was put under treatment with Coley's fluid, and he writes me that the tumour has entirely disappeared.

Dr. HARMON SMITH: We should not depreciate the benefits of Coley's fluid. I recall a case of sarcoma of the antrum occupying the entire nasal cavity and projecting outward. There was lymphatic involvement and the case seemed hopeless. It was pronounced sarcoma by the pathologists. I said the only thing we could do was to operate, and that if he died on the table it would be the most satisfactory termination of the case. The patient went to the General Memorial Hospital, was put under treatment with Coley's fluid, and the sarcoma entirely disappeared.

Dr. HENRY L. SWAIN (New Haven): Whether the disappearance of these tumours is due to tumour transformation, as has been suggested, or to the agents employed, the fact is that we stand with reference to them in the position of strict empiricism. This applies to Coley's fluid as much as to anything else. If we could collect all the observations on the subject, we might then have something to go by; until that is done its use will always be empirical. I have two cases in which it seemed to do good, and many others in which it accomplished nothing.

Abstracts.

PHARYNX.

Davis, E. D. D.—Ulceration of the Soft Palate. "Proceedings of Royal Society of Medicine." Section for the Study of Disease in Children, June, 1916, p. 79.

The case shown was that of a girl aged thirteen. She had a large irregular ulcer involving the left half of the uvula, soft palate, and left pillar of the fauces, with considerable loss of the left half of the palate. The ulceration was a typical of lupus, tubercle, or syphilis. There was no other lesion of the nose, pharynx, larynx, or ear.

The Wassermann test yielded a positive reaction. There was a definite history of infection with syphilis of both parents. *Archer Ryland.*

NOSE.

Wheelock.—The Blood-clot Dressing in Operations for Simple Mastoid Abscess. "Laryngoscope," 1916, p. 93.

The paper is based on thirteen consecutive operations for simple acute mastoid abscess in which the wound was closed at the time of operation. The cases only remained seven days in hospital. Wheelock is aware that many of the best surgeons have tried the method and put it aside. The blood-clot dressing was first proposed by Sprague, of Providence, R. I.,

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