CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

Meeting of December 5, 1920.

THE PRESIDENT, DR. ALFRED LEWY, IN THE CHAIR.

Multiple Brain Tumor.

Dr. Joseph C. Beck showed a specimen of a brain from a case of multiple brain tumor. Many diagnoses had been made in the case by various neurologists who had seen the patient and made careful examinations, each of them having placed the lesion in a different part of the brain. When the patient was first seen by Dr. Beck, he diagnosed a frontal lobe abscess associated with frontal sinusitis. Operation being decided upon, Dr. Beck exposed the frontal sinus and found it full of thick pus and the lining membrane markedly thickened. The nasofrontal duct appeared completely blocked. Nowhere could there be found any fistula or atrium towards the brain.

Leaving the area entirely separate and going into the aseptic area corresponding to the frontal lobe region, he found a thickened dura coming on from the posterior or cerebral surface of the frontal sinus. Upon opening this dura no abscess was found intradurally or within the brain; there was nothing but the thickened dura, a piece of which he excised for subsequent microscopic study. After some time (five and one-half months) the patient succumbed to the disease. The symptoms during this period were exceedingly variable; there were tonic and clonic contractions of the feet which disappeared, and mental and cerebellar symptoms became more evident.

Necropsy, performed by Dr. Beck, showed that each of the diagnoses based on frontal symptoms was correct. He found many encapsulated tumors, some of which dropped out when the brain was sectioned after hardening. These tumors were found in the cerebrum as well as in the cerebellum, which accounted for the great variety of symptoms. At first Dr. Beck thought that the tumors were multiple syphilomas, but histologic sections showed that they were walled off epithelial tumors—walled off carcinoma of the brain. Dr. Beck had never before known of this as a primary growth, but in the literature he found two cases, reported by Fraser, and one man in Spain (cited by Greenwood of England) reported seven cases. It was interesting to note that Lewis Fisher of Philadelphia, who saw the man, localized the lesion exactly corresponding to one of the lesions that were found postmortem.

Dr. Beck called attention to the method by which this specimen was imbedded in a block of paraffin, which made it very easy to display, and he thought it would preserve the sections well. (Fig. 1.).

Bezold's Abscess.

Dr. Beck also showed two cases of unusual mastoiditis. The first case was that of a man whose trouble first manifested itself in June,

1917, by earache in the right ear and dizziness. These symptoms continued for two or three weeks, the patient being unable to work; gradually the symptoms improved and the patient returned to work, but soon they returned, more marked than formerly, and he again went to bed. One morning he arose and found himself staggering to such an extent that he could not walk. A doctor was called, who applied hot water bottles to the head; this gave no relief and ice packs were then used. Later the patient was taken to DeKalb, where he consulted Dr. Smith, who, after a careful examination, including an X-ray of the head, diagnosed sinus disease. The physician who had formerly seen the patient declared that it was not a case of mastoid disease.

Two days after the diagnosis was made the patient was operated upon; after the operation he was told by the doctor that the mastoid cells were full of pus. The operation afforded no relief from the symptoms, and the wound continued to drain. In November the patient left the service of Dr. Smith and placed himself in the care of Dr. Thiele, who brought him to Dr. Beck.

Examination at that time showed a fistula behind the right auricle which was discharging pus, which proved to be of mixed culture. A probe followed the fistula down toward the neck, somewhat posteriorly. The patient complained of lack of motion of the neck, and examination revealed resistance to movements, though by persistence and patience it was found that almost all movements of the head and neck were possible. Examination of the ear revealed no evidence of any suppuration ever having existed. Tests showed the ear to be reduced to one-half of normal. The Weber was lateralized to the right and bone conduction was markedly increased. The test of jumping back from the tips of the toes to strike the heels against the floor gave a suggestion of spinal caries.

The patient was kept under observation in the hospital for one week, during which time the vestibular apparatus was explored; all the reactions proved practically normal, as did also the symptoms referable to the cerebellum. X-ray pictures of the head and neck, with special reference to spondylitis, showed no evidence of any vertebral trouble. The temperature remained constantly normal; all laboratory tests proved negative. A diagnosis of osteomyelitis of the temporal bone finally was made and the patient was operated upon.

Operation revealed granulation tissue around the fistula, and upon its removal there was soft bone at the tip which appeared much like detritus. A continuous bleeding vein was encountered at the depth of the tip of the mastoid toward the neck; the bleeding was controlled by the use of surgical wax, and the incision was continued through the mastoid backwards and outwards toward the occiput, where a collection of pus was found between the occipital bone and vertebral column. The under surface of the occipital bone in the vicinity of the pus pocket was eroded, and it was scraped down almost to the dura, but the dura was not exposed. The wound was closed by bringing the flap back and sewing it in position. Drainage was established by means of a stab wound behind the incision. The drainage was continued for about two weeks, when a bismuth injection was made under considerable pressure. Immedi-

ately following this the patient felt something in the middle ear, which was assumed to be particles of bismuth escaping through aditus and antrum into the middle ear. There was a feeling of fullness in the ear about two weeks, when all symptoms began to subside. Aural inspection failed to reveal any foreign substance, and it was concluded that there was some secretion rather than bismuth in the middle ear. The wound healed and there had been no recurrence in three years, and the hearing was not affected. No spinal puncture was made, but it was concluded that the symptoms were irritative.

The second case was that of a man who had an acute otitis media, followed by a rapidly developing mastoiditis. He was first seen on May 12, 1920. A simple mastoid operation revealed no evidence of erosion or other necrosis in the region of the tip in the neck. He made an uneventful recovery, and in thirteen days was out of the hospital. The wound healed and the recovery was absolutely normal. Two or three weeks later there was slight swelling over the mastoid, which was opened and cleaned out and drainage instituted. The fistula continued and a larger exploration was made. Following down into the region of the occiput, they found destruction of bone, and upon exploring the sinus and dura at that point pus was found. The sinus had been thought of, but there were no symptoms referable to it. However, upon pushing back the tissues of the neck, pus exuded, but on pressure of the neck there was no pus. Drainage was continued for several weeks, but on pressing back the tissues of the neck small quantities of pus continued to escape. Afterward they made a still larger exploration and found that the pus ran much more forward than in the previous case, collecting close to the region of the external jugular.

Another operation was performed, going down to the neck and opening through the sinus to get at the infected area, which was cleaned out and drained. The patient made a good recovery and went along practically without temperature but the pus persisted. Later an incision was made through the clinoid muscle, which was followed down to the depths of the neck and the cavity cleaned out. This had not been done before because of fear of infection of the jugular wound. The patient had been perfectly well for four weeks.

Smears showed a mixed bacteria, diplococci predominating; cultures also showed a predominance of diplococci, both at the primary examination and subsequently. The Wassermann reaction was negative.

DISCUSSION.

Dr. C. H. Long asked Dr. Beck if he had gone in the first time posteriorly if he would have accomplished the same results.

Dr. Beck said that on going down the same as in the first case he found that the pus went forward and he could not go posteriorly, but had to go through the mastoid foramen, sacrificing the facial nerve, or go through the sinus in the way he did. It was impossible to reach it from the back and get the necrosis which he could see and feel. It was only by going through the sinus that he was able to reach it.

Dr. Edwin McGinnis showed a patient who had had

Double External Frontal Sinus Operations

following two intranasal operations.

The patient was a man who had a double frontal sinus infection, with an intranasal operation on both of them. The first operation was performed by Dr. Good eight years ago; at that time the anterior end of the middle turbinate was removed, and the anterior ethmoid cells were rasped forward. Dr. McGinnis had seen Dr. Good perform this operation several times, but thought he had not reached the frontal sinus in this case. The other side had been operated by the late Dr. Friedberg. In 1918 the patient entered the Presbyterian Hospital with severe frontal pain, and pain through the eye, but did not wish the intranasal operation again. All the landmarks were gone, so it was decided to do an external operation. They opened through the eyebrow and made a little peek-hole through into the frontal sinus. The front wall of the sinus was one-fourth inch thick. On the floor of the frontal wall of the sinus there were two quite large polypi, one attached to the posterior and one to the anterior wall. The sinus was filled with pus. The polypi were removed, the base curetted and on going down gently into the nose, a couple of ethmoid cells were found that had not been touched by the first operation.

The other sinus was operated in August, 1920. An incision was made through the eyebrow, the brow elevated and a small opening made in the front wall. The case was interesting because all of the sinus lining was detached and the mucosa seemed about three-sixteenths of an inch thick.

The patient made a pretty good recovery with a freely movable scar; the discharge had cleared up and the nose was in about the same shape as before the operation. The Wassermann reaction was negative with both blood and spinal fluid.

DISCUSSION.

Dr. E. P. Norcross asked whether Dr. McGinnis operated through the peekhole or whether he enlarged the opening.

Dr. McGinnis replied that he did a modified Lothrop operation, butting up through the nose. He had never been able to use the hurr successfully through the nose because it seemed to tear things so much. The septum was not removed in this case.

Dr. Walter H. Theobald presented a thesis entitled

"A Radical Treatment for Chronic Suppuration of the Antrum with Modification of the Canfield Technic for Operation."*

DISCUSSION.

Dr. Joseph C. Beck said he was much pleased to see an operation illustrated which he had been doing for some time. He thought he got it from Pierce or Skillern, and had published it in Ochsner's book on diagnosis, both the posterior incision and turning the flap over, not taking out but raising the flap toward the septum. He

*See page 131.

called it the "Skillern operation" because Skillern had the opening through the pyriform fossa, but later gave it up because it was too irritating. Dr. Beck used the electric burr, doing the operation very quickly, and that gave more room to work with than the large nose instruments. It was not necessary to see, because after exposing the margin of the pyriform fossa one could bite it through. He had obtained more satisfactory results from this than from any other antrum procedure.

Dr. Beck congratulated Dr. Theobald on bringing up the subject and was glad to have heard his description, although he believed someone else had done it.

Dr. Norval H. Pierce thought that the matter of priority was always a small matter to argue about. He had been doing the operation Dr. Theobald described for over ten years. It was founded on the Denker idea, the natural suggestion that would come to one's mind—could we not do away with the buccal incision? When that thought came to his mind he made the incision through the pyriform crest, and found that by reflecting the facial soft parts and lateral wall of the nose one could get an ample view of all parts of the antrum. He thought it rather an original idea to not sacrifice the inferior turbinate. He was not sure whether it was quite the right thing to do in all cases. He believed it caused a more rapid contracture of the hole, but he had seen a number of cases that had returned after five years with an ample orifice in the inferior meatus, and the anterior fifth, which had been temporarily detached, had grown back into place. The operation certainly gave a complete view of the antrum with a minimum amount of destruction, and he considered it as corrective as any operation could be.

In regard to the tape being left in, this is most frequently due to the gauze tearing. In his opinion, it would be a good plan to measure the tape before putting it in and check it up after taking it out, as it was a very simple matter to leave a piece in, but it was a very unpleasant occurrence after the wound had practically healed and was rather small to have the discharge persist and the unpleasant odor continue. When such a thing occurred, it was pretty safe to say that the packing had been left in, and the best thing to do was to reopen the wound and remove it.

Dr. Robert Sonnenschein said that he had asked Dr. Skillern about his operation some years ago and was told that he used it only in acute cases, and expected to use it only in acute cases where he wished to keep the antrum open for a few weeks. He did not make a flap. In the operation described by Dr. Theobald, a flap was made, and if it stayed in place it prevented closure of the wound.

Dr. Sonnenschein had had his own antrum operated upon by the essayist some time ago, and the work was very skillfully and almost pleasantly done, except for one feature—the use of the trephine. He was very glad that had been discarded, for when one felt the vibration as it struck the roots of the teeth it was very unpleasant. He felt that the rongeur method would be much more agreeable. His operation was very successful, and while sometimes infection occurred, a few irrigations caused it to subside. The only disagreeable feature remaining was some anesthesia of the teeth most adjacent to the antrum.

Dr. Sonnenschein congratulated Dr. Theobald on his thesis and upon his entrance into the society.

Dr. E. P. Norcross said that Dr. Skillern termed this operation the "preturbinal operation." As he remembered it, he described it to him as a modification of the Canfield operation, but said it was a much less radical procedure. Dr. Norcross had performed the operation several times and to him the most surprising thing was the thickness of the pyriform crest. In his opinion, the point that should be appreciated even more than the method of operation was the fact that all kinds of antra, having all kinds of pathology, had been cured by a comparatively simple operation. It did no harm to try this method first, and if after a time it did not cure the trouble there was no objection to doing a Caldwell-Luc or Denker operation. He had been more successful by removing the anterior tip of the turbinate, thus getting a more permanent opening. In the last year Dr. Norcross had seen a number of cases that had been operated by the Krause-Mikulicz operation, simply making a hole in the nasal wall. This had relieved the patients of all symptoms, and they had had no unpleasant symptoms following the operation, all of which went to show that too radical surgery on the antrum or any other part of the body was not always necessary to obtain the desired result.

Dr. Norcross thought the essayist was to be congratulated on having a series of forty cases that had been cured. That fact alone must bear out the practicability of the operation.

Dr. Charles M. Robertson thought this operation was a good one but that there are so many good operations for the antrum that one could not do any one in all cases.

There was one place in this operation that made trouble. When the anterior inner edge of the cavity was taken away it left a place where the cavity was covered by the soft tissues of the cheek, at which site granulations would occur, and, as the essayist said, he had to apply nitrate of silver during the first week, which showed a piling up of granulation tissue in the opening of the antrum. The soft tissues must be watched in all antral cases. Granulations in this place encroach on the opening and destroy the opening from the anterior end.

The operation Dr. Robertson had always advocated was a modified Caldwell-Luc with special features as to the meatal flap of mucous membrane. In going through on the buccal surface one could easily determine at a glance the position of the attachment of the inferior turbinate body, as it shows a bulge on the nasal wall extending from before backward and downward, corresponding to the attachment of the inferior turbinated bone. In the operation he advocated the wall of the inferior meatus was removed in its entirety down to the floor, leaving the floor of the antrum and the floor of the nose on a level so there would be no interference with drainage from the antrum.

The mucous membrane of the inferior meatus was not attacked until the bone had been completely removed and the edges of the wound smoothed. The nasal mucous membrane was then cut in the form of a letter X from before and upwards downward and backward and from below and forward, upward and backward, which created four flaps which were reflected into the antrum and

held in place by the pack which was introduced into the antrum. These flaps cover the edge of the bony wound and part of the anterior antral wall and no soft tissue comes into contact with the nasal wound.

Thus the edge of the wound into the nose is covered with mucous membrane which secures a permanent opening as large as at the time of operation. Dr. Robertson thought operating through the buccal cavity gave a most beautiful result, and affords a better view of every part of the antral cavity. He had operated in this way for eight or ten years and had measured the opening into the antral cavity afterward and found that the opening remained the same as at the completion of the operation. This operation gave the advantage of a cavity in which one could see, and if one desired to drain the sphenoid into the antrum through the posterior ethmoid cells, it could be done under direct inspection. The operation could be done just as quickly as the other, and the buccal wound was not objectionable, being at the gingivobuccal junction, which precluded gaping, and which closed in from three to four days.

Dr. Robertson considered the operation under discussion admirable, but wished to enter a protest against displacing the turbinate or cutting any off. In his opinion, this would be sufficient cause for perverted physiologic function of the inferior turbinate.

In case the inferior turbinate extended to the floor of the nose enough might be trimmed from its lower edge to allow a ventilation space of six to eight millimeters between the lower edge of the turbinate and the nasal floor.

Dr. Frank Brawley said that he had seen Dr. Pierce and Dr. Theobald perform this operation and had since done six of them himself. He believed it was the best procedure for the chronic antrum that he had ever tried. He had experienced no difficulty in the after healing in any of the six cases he had had. However, he had taken off the tip of the turbinate in every case, but would try refracting the turbinate in the future.

One point was important in order to get a clear field, and this was to be careful to make the incision over the pyriform crest in the mucosa. Before he had much experience he made the incision at the mucocutaneous junction and got a good deal of bleeding, which he had difficulty in controlling. It was just as easy to make the incision in the mucosa, and there was much better control. It had appealed to him particularly, because it was such a safe operation, so far as the lacrimal duct was concerned. There was no danger of injuring the lower end of the duct by this method.

Dr. Alfred Lewy stated that he had the pleasure of working in Sturmman's clinic in 1898 when he perfected his operation, and Sturmman was surprised to know that Canfield had already perfected the operation and published it. He thought Canfield beat Sturmman to the publication.

Several years ago Dr. Lewy saw Dr. Robertson perform his operation, which looked like a modification of the Caldwell-Luc. He did not remove the tip of the turbinate. He operated under general anesthesia, and Dr. Lewy thought it took exquisite skill to peel off the bone from the membrane as he did. The unusual skill required

would probably prevent Dr. Robertson's technic from becoming popular.

Dr. Walter H. Theobald (closing the discussion) thanked the members for their discussion, and stated that in the first fifteen or twenty cases he used the electric driven trephine or drill, but found it to be a great discomfort to the patient. It was as disagreeable as having one's teeth drilled, so he discontinued using it.

The operation mentioned by Dr. Beck as the Skillern, the writer assumed was used only in acute cases.

Dr. Theobald believed Dr. Robertson would have some difficulty in keeping his flaps in place. The operations which the writer had reported were of the intranasal type. Canfield claimed priority for this operation in that his publication preceded Dr. Sturmann's of Berlin by two months.

As to the after-treatment, it consisted largely in controlling the granulation tissue which formed so rapidly around the first incision. After the packing was removed he irrigated the antrum through the canula until the secretion subsided, which usually took about ten days. The patient came in for irrigation a week later and perhaps two weeks later for further irrigation. For this purpose he usually used an astringent solution of cupric sulphate in dilution, about 1:6,000.

Dr. Edwin McGinnis read a paper on

"Problems in Bronchoscopy and Esophagoscopy"

illustrated with lantern slides.

Dr. McGinnis presented graphically some of the phases of this large subject and showed examples of the place of arrest of foreign bodies in the esophagus.

Case 1.—Child, 9 months old. Open safety pin resting in the laryngopharynx with the points upward and ring wedged in the introitus esophagi. It had been in this position for two weeks and was removed by turning and extraction with direct laryngoscope.

Cases 2 to 8 were coins and telephone slugs in the esophagus either at the introitus or further down at the sternoclavicular notch. Removed by means of direct vision.

Case 8.—Ring from an alarm clock lodged in the esophagus at level of the sternoclavicular notch. Three previous attempts at removal were unsuccessful. By means of fluoroscopic esophagoscopy it was removed and the child recovered.

Case 9.—Lead horse's head, prize from popcorn package, lodged in upper end of the esophagus. Kindly referred by Dr. H. R. Boettcher. Removed under direct vision.

Case 10.—Child with dorsal Pott's disease. Penny lodged at cardia. Passage of esophagoscope set up peristalsis, and penny could be seen passing through into the stomach.

BRONCHOSCOPIC CASES.

Case 1.—Upholsterer's tack in right bronchus of child 3 years of age, which had been in position six weeks. X-ray revealed tack. Removed fluoroscopically by means of upper bronchoscopy. Uneventful recovery.

Case 2.—Kindly referred by Dr. Harry Pollock. Six penny nail in left bronchus of child 20 months old. Nail had been in position for about six months. Fluoroscopically removed nail from bronchus, but point stuck into larynx and it was necessary to do a thyrotomy to remove nail tracheotomy. This child died one week later from a pneumonia.

Case 3.—Upholsterer's tack right bronchus of an adult aged 33. Removed fluoroscopically. Uneventful recovery.

Case 4.—Rubber in right bronchus. Child. Kindly referred by Dr. Joseph Beck. Lung on the same side appeared of greater density than the other lung on X-ray plate. Removed fluoroscopically. Recovery uneventful.

Case 5.—Patient, aged 43 years. Referred by Dr. Oliver of Chicago. Six weeks previously had had fourteen teeth extracted with nitrous oxid gas anesthesia. Was normal for about two weeks and then began to cough. One week later pain appeared in the right chest, and X-ray showed foreign body in right bronchus. Removed fluoroscopically and was found to be part of a molar tooth. On looking again another object presented itself. This proved to be an amalgam filling and was removed. Recovery was uneventful.

Case 6.—Watermelon seed in the right bronchus of an infant of 8 months. Faint shadow on the X-ray plate. Removed by upper bronchoscopy. Recovery uneventful.

Case 7.—G. J., age 5, seen November 8, 1918. In the morning the child was eating some raw carrot; with a sudden sharp intake of breath, she was seized with a violent fit of coughing which persisted for some time. She became hoarse and decidedly wheezy. On admittance to the hospital, breathing was slightly accelerated. Examination: Right lung, increased breath sounds, bronchial breathing with wheezing rales anteriorly. Left lung, absence of breath sounds, no area of dullness.

November 8, 1918, at 8 p. m., at Presbyterian Hospital, without anesthetic, upper bronchoscopy. The larynx and upper part of the trachea were clear; at bifurcation and extending into left bronchus several small yellowish objects were seen. These were removed with forceps, there being two large pieces of carrot, about the size of a small pea, with several smaller pieces in a great quantity of mucus. The patient left the operating room in good condition. At 11:05 the examination revealed air going into both lungs and considerable roughening of breath sounds. Four days afterwards the temperature went up to 103.6°, but the next day dropped to normal. She left the hospital November 13, 1918. Her mother wrote that she had pneumonia afterwards and coughed up a little piece of carrot.

Case 8.—L. H., aged 1 year, referred by Dr. A. E. Loewy. Three days before admittance, or on June 9, 1920, the baby was eating a hard boiled egg and some of the eggshell became lodged in the larynx. This produced difficulty in respiration which gradually became worse. At the time of entrance into the hospital there was marked retraction of the sternum with each respiration, as well as marked movement of the lower ribs. The feet were becoming cyanotic. The child acted like one with laryngeal diphtheria in need of intubation.

Coarse rales could be heard all over the chest in front and behind. On June 12, 1920, at the Presbyterian Hospital, by direct laryngeal examination could see a piece of eggshell in the larynx anteroposteriorly between the cords. This broke up into little pieces under the grasp of the forceps. Breathing was not much better after this, so a tracheotomy was performed under local anesthesia. Upon opening the trachea, some eggshell presented in the wound and this was removed. Breathing was better with the tube in place.

Temperature at the time of the operation: 102.6 degrees; June 13, 102; June 14, 103.2; June 17, 99.6; June 18, 103.

On June 17th the tracheotomy tube was removed for cleansing and the patient had great difficulty in breathing until the tube was replaced. On June 18, 1920, at 4:25 a. m., the child died gasping for air.

Postmortem examination: Beginning just at the lower edge of the tracheotomy opening was a large fibrinous exudate almost filling the lower trachea and extending down into the bronchi at the bifurcation, which was the cause of death. No diphtheria organisms were found.

Case 9.—H. H., aged 3 years, referred by Dr. John E. Rhodes. On September 22, 1920, the patient's parents noticed the boy playing with some acorns. A short time later they found him in a fit of coughing, and becoming quite blue, breathing rapidly and with great difficulty. In a short time breathing became better and the color became normal. When first seen by Dr. McGinnis on September 12, 1920, he had been having asthmatic attacks for six or seven months. Upon X-ray examination, the upper lobe appeared to be more dense. No shadow of a foreign body was seen. Direct laryngoscopic examination revealed something coming into the larynx and receding with inspiration and expiration. It was grasped with a forceps but could not be extracted. Then it disappeared and a good deal of secretion was coughed out. Upon insertion of the bronchoscope some obstruction was noted, but careful search failed to reveal any foreign body in the bronchus.

An intubation tube was inserted, which was removed the next day. In one week another examination revealed a swelling of the right side of the subglottic space. The child became cyanotic and a tracheotomy was performed. The incision opened up a large peritracheal abscess, probably due to a broken down cervical gland. The child improved and was sent home with the tracheotomy tube in place.

In conclusion, Dr. McGinnis said that these cases now have an earlier diagnosis and are in better shape for operation. His early experience in the practice of the late Dr. Ingals was discouraging in that the foreign bodies remained so long unrecognized. There was usually abscess formation and extraction was almost impossible.

DISCUSSION.

Dr. George W. Boot congratulated Dr. McGinnis on his success in this very difficult kind of work. In his opinion, no work is quite so difficult as removing foreign bodies from the bronchi and esophagus. He was surprised to know that Dr. Ingals had not had more

foreign bodies to remove than Dr. McGinnis reported. Dr. Ingals' finder was altogether different from Dr. Boot's, as his has only one turn, and the end, and Dr. Boot's was a regular corkscrew, so that by rotating it the point of the open safety pin was brought within the spiral and protected in such a way that the safety pin could be extracted without tearing the mucosa.

There was one point in which he did not agree with Dr. McGinnis; he thought no one should ever search blindly for these foreign bodies. Wherever possible, the foreign body should first be seen before attempting to grasp it. He very recently had an experience with a foreign body, which was a little different from the usual. The patient was a child of 18 months, who had inhaled a piece of carrot and the family physician had tried to extract it. The child was taken to the hospital and an interne tried to remove it and the piece of carrot turned and shut off the breathing. The intern did a hurried tracheotomy and then Dr. Boot was called. He found it impossible to use a suspension apparatus and then the bronchoscope as he ordinarily did because of the tracheotomy tube's being in place, but he finally located the foreign body and removed it.

He thought it was surprising how many of the patients swallowed coins. He once had a colored servant maid who stole her mistress' jewelry and swallowed a diamond ring. By the time he reached the patient the foreign body had passed into the stomach and out of his territory. The hospital people were going to do a gastroenterostomy, but Dr. Boot told them to wait for a while, so two policemen were kept on guard, and in two or three days the patient passed the ring.

Dr. Otto J. Stein has been interested in this subject since the inception of the work, and in the spatula which Kirstein first brought out, which he had used very persistently in his work. He then became very enthusiastic about the work with the bube, as brought out by Killian, and thought it was remarkable how much success one could obtain in patients with real pathologic lesions within the esophagus or tracheobronchial tract, as well as in finding foreign bodies if one gave a lot of time to it and allowed others to know they were doing the work.

A number of years ago there was difficulty in finding such patients to work upon. After realizing that he never would become an expert, he almost dropped the work and found that by unanimous consent this particularly difficult work of scoping really belonged in the hands of only one or two who were especially interested and who had the peculiar ability to apply their skill. It seemed to be the unanimous opinion that the work should be in the hands of Dr. Friedberg. Aside from the foreign body extraction he used the tube work quite often as a means of diagnosis and in the treatment of tracheal ulcers and some years ago used it a good deal in bronchial asthma, thinking that by dilatation of the trachea some of these cases could be relieved, and it did bring relief in many cases.

Aside from the foreign body work there was a very definite field for this work. In making applications to ulcers in the trachea, in removing sections of tumors below the glottis and in the larynx, diagnosing stenosis in the esophagus and trachea, made the application of the method much broader than one ordinarily thought.

Dr. Stein believed every laryngologist should practice tubing, and it was now being taught at the Postgraduate Hospital. In that way it was possible to teach the hand and eye to locate different parts of the trachea by demonstrating that one could work bimanually. With the probe and forceps and measuring the distance, one did not have to do this very often before becoming accustomed to the localization of the parts, and the method was often of much assistance.

Dr. Harry L. Pollock referred to a case seen recently which was very interesting along this line. The patient was a man who had a tracheotomy performed in June. The surgeon who did this died within a few days afterward, and everyone was afraid to remove the tube. The patient was sent in to him with a history of having cleaned the tube with cotton wrapped about an applicator. He was cleaning it in this way one day, when suddenly the cotton and applicator disappeared down the trachea, and the patient stated that when he was sitting up it obstructed his breathing. He came in bending away forward, for in that position there was no obstruction. Dr. Pollock took out the tube and did a lower bronchoscopy, but could see no cotton or applicator, and decided that possibly the thing had gone upward, above the tube. If it had been below the tube, he felt that it would have dropped further down. The patient was breathing fairly comfortably lying on his abdomen and the following morning they suspended him. Examination showed complete edema which closed the entire larynx. The following day the tube was again removed, and when it was replaced again the patient said he could feel the applicator at the end of the tube. The tube was pulled out again and the cotton and applicator came out with it. He thought it had gone upward and when the tube was removed it permitted it to fall down.

Dr. Pollock said they had had a good many cases of foreign body removal, and he agreed with Dr. Boot that one should never search for them blindly. He believed that all the trouble in these cases came from laryngologists going down and grasping the membrane. He was certain that every such case that had been referred to them that had died, had died as the result of having the mucous membrane torn and infected. He recalled a case seen with Dr. Friedberg, in which the patient had swallowed a tack, and they could not find it. He used the fluoroscope and directed the tube the same as Dr. McGinnis showed in the nail case, but Dr. Friedberg could not get the tack either way. They could see several times that he was immediately over it, but he was unable to get it. Dr. Pollock thought that the fluoroscope, to be of the most service, should have two tubes, a lateral and an up and down, and that it was far better to go right down and see what was being done rather than depending on the fluoroscope.

Another case which had astonished him was that of a little child 2 years old, who had swallowed a quarter. They took an X-ray picture and found the quarter in the stomach, although he had thought that a quarter would not go through a child's esophagus. A neighbor had told the mother to give the child a big dose of castor oil and that same evening the child passed the quarter.

Dr. Norval H. Pierce said that lately he removed a sandbur from the larynx of a young woman after it had been in position for al-

most a week. The sandbur was situated in the anterior portion of the larynx, between the vocal cords. The patient, a young lady, was walking with some friends, and in going through the grass the sandbar had attached itself to her skirt. She had on a pair of mitts, and in removing the bur from her skirt it attached itself to the mitt and she attempted to remove it with her teeth, and in doing so she inhaled the sandbur. The remarkable thing about the case was that the patient had very little discomfort. There was no edema and little pain in the larynx and the bur was removed very easily. The patient went home in a day or two.

Dr. Edwin McGinnis (closing the discussion) thanked the members for their liberal discussion. He felt that there was one serious side to the question: if anyone wished to go into bronchoscopic work thinking to get rich, he would get badly fooled. Most of the people who get foreign bodies into the trachea and bronchus are the children who are not taken care of, and the parents are unable to pay very large fees. The instruments are very expensive. Those that Dr. Ingals had used were given to Dr. Friedberg and had now passed on to Dr. McBride. The remunerative side of the work was not great, but the patients came to the office, as they had done in the days of Dr. Ingals and Dr. Friedberg, and someone had to take care of them.