whilst the head and shoulders are lower than the level of the body to the extent that all fluids gravitate from the larynx and trachea. In the Rose or hanging-head position the patient's shoulders, after induction of anæsthesia, are drawn to the end of the table and elevated by a firm cushion, whilst the head is allowed to hang over the end of the table, firmly grasped on each side by an assistant's hands in order to steady and keep it in the middle line (Figs. 14 and 15). This position is commonly used for performing a low tracheotomy, especially in patients who have a short, fat neck. Chevalier Jackson uses the Trendelenburg-Rose position, which is a combination of these two positions. The advantage of these positions is that there is little danger of an aspiration pneumonia following the operation.

The objection, however, to these two positions is that the veins of the head and neck become distended with blood owing to gravitation, and considerable oozing of blood may consequently occur in the operation field, thus impeding the view of the parts. The difficulties of hæmorrhage occurring during removal of the growth has frequently been referred to by writers, though Butlin[1] says he had never seen bleeding which could cause the least anxiety. The position recommended is one in which the patient is placed on the back on the operating-table, whilst the shoulders are elevated by a firm cushion; this brings the head into full extension. A second cushion or sand-bag is then placed under the neck in order to raise it and cause the structures on its anterior aspect to become stretched and prominent (Fig. 18).

This is the ideal position and the one advised for thyro-fissure, since it is more comfortable for the operator to work in this position and less dangerous to the patient.

Chevalier Jackson has pointed out that while blood can be aspirated up the inclined closed trachea, it is impossible for it to be aspirated along an open trough—*e. g.* the opened larynx; so that with the head, neck, and shoulders in this position it is apparent that there is little risk of any blood entering the trachea and lungs (Fig. 21).

(*To be continued.*)

SOCIETIES' PROCEEDINGS.

ROYAL SOCIETY OF MEDICINE—LARYNGOLOGICAL SECTION.

March 2, 1917.

President: Mr. T. Mark Hovell.

(*Concluded from p.* 153.)

A Series of Twenty-four Foreign Bodies removed from the Air and Food Passages, with Indications as to the Lessons to be derived from some of the Exhibitor's Experiences.—Herbert Tilley.—The point accentuated in certain specimens in this series is the one raised by Dr. Irwin Moore—viz. that it is inadvisable to use blind instrumentation for the removal of foreign bodies from the air and food passages.

In one of the patients I was asked to remove a coin from the upper

[1] "The Operative Surgery of Malignant Diseases," 1900, p. 191.

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part of the œsophagus in a hospital patient, but before I arrived there an enthusiastic house-surgeon tried to get the coin out with a coin-catcher. When I employed œsophagoscopy I could not find the coin in the gullet, and immediately afterwards a skiagram showed it was in the stomach; it had been pushed down by the ineffectual attempt to remove it with the coin-catcher. It was duly passed *per anum*.

Another case occurred in a soldier, in whom a portion of shrapnel casing lodged in the larynx, attention having been directed to it by hoarseness. I saw something black in the left ventricular band, and decided to try to remove it by the direct method under general anæsthesia. It slipped away from the forceps and disappeared. As the patient was struggling most of the time, I obtained permission to bring an expert anæsthetic the following week, and we found the foreign body in the left bronchus, where it had been located by the X rays in the interval. The lesson to be learnt is that for the removal of foreign bodies from the larynx the patient should be in the Trendelenburg posture, so that gravity does not aid the foreign body in gaining a deeper position. Also, one should have bronchoscopic instruments handy, in case the body slips from the larynx to a deeper region.

In another case, which was shown at the International Medical Congress in London, a pea had lodged in the right bronchus of an old man. Since it would have been futile to try to crush the pea and bring it out, we passed a bronchoscope on to it, and inserted a plug of wool soaked in paraffin, until it was close on the foreign body, and then by sudden withdrawal of the improvised piston the intruder was brought into the tube and readily extracted.

One of the three safety-pins was removed last Christmas Day morning. It had been swallowed forty-eight hours previously. The matron and the house-surgeon of a hospital considered the patient's story to be fanciful. As the symptoms persisted, a skiagram was taken and the pin located. I succeeded in removing it quite easily with a Mosher's œsophagoscope. The moral of this case is that the history given by a patient concerning a foreign body should not be pooh-poohed or neglected. It is always safer to have a skiagram taken.

The turkey bone was removed from the gullet of the wife of a medical man. Her husband tried on three occasions to push it further down with a probang. The result was some ulceration of the œsophagus. We removed it easily by the direct method (Mosher's distal lighted œsophagoscope).

This specimen is from my youngest case of a foreign body. The patient was a baby, aged four days. The nurse had given the child a "comforter" to suck, the inside of which was filled with cotton-wool. The child detached the comforter from the shield and swallowed it; the secretions of the gullet made the wool swell and the œsophagus was obstructed, so that nursing at the breast was impossible. We removed the foreign body by means of a small bronchoscope.

In another instance a message came to my house from University College Hospital that a child had swallowed a foreign body. I told them to put the patient under an anæsthetic, and I would be round in ten minutes. I removed the foreign body and was back at my house within thirty minutes of leaving it.

The last specimen was from a fatal case. A man was sent into the hospital forty-eight hours after having swallowed a denture during sleep. Before admission, ineffectual attempts had been made by means

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of a probang to push it into the stomach. The lower pharyngeal regions were obstructed by œdematous swellings, the breath was foul, and the whole area was bathed in purulent secretion. We found our way into the œsophagus, and saw the denture lying in a greyish-green surrounding. We took hold of it with forceps and removed it without difficulty, but the patient died forty-eight hours afterwards. *Post-mortem*, three perforations were found in the side of the œsophagus close to the foreign body.

I show these foreign bodies and skiagrams in order to help in establishing the rule that at the present moment when endoscopes are so numerous, and there are so many experts to use them, it is unjustifiable to attempt the removal of foreign bodies in the air or food passages by blind instrumentation.

Pin in Bronchiole of Posterior Lobe of Right Lung.—Hunter Todd.—Girl, aged twelve, admitted to the London Hospital on November 29, 1916. The mother stated that on the previous evening she fell off a chair whilst holding a long pin between her teeth. The girl complained of no symptoms, but as her mother could not find the pin she brought the child to the hospital to be X-rayed.

The pin appeared to be low down in the right bronchus with the head lying downwards. On the day of admission I passed a bronchoscope (medium size) along the right bronchus until it could be pushed down no further; the distance measuring 13½ in. from the teeth. A good view of the openings into the bronchioles could be obtained, but the pin could not be seen.

Two days later another attempt was made under the guidance of an X-ray screen. A photograph was taken when the bronchoscope had been inserted at a distance of 10 in. from the teeth. It shows it to be in the right position, although some way from the pin.

A third attempt was made a week later (December 8) also under the guidance of an X-ray screen. When the patient was lying on her back it seemed as if the bronchoscope had almost reached the pin, and that a pair of forceps passed along it would pass over the pin; but on turning the patient on her side it was found that the bronchoscope and forceps were well in front of the pin. It seems, therefore, that the pin is situated in the lower posterior bronchiole.

The patient suffered no inconvenience as a result of these examinations. She was kept in the hospital until January 12, over five weeks after the last examination.

An X-ray photograph, taken two days ago, showed the present position of the pin, which does not seem to have moved. The patient is still in the best of health and has no cough nor expectoration.

The points on which I would like the opinion of members of the Section are the following:

(1) Should a further attempt be made to extract the pin through the bronchoscope or should it be left *in situ*?

(2) Is there more danger in leaving it *in situ* and risking an abscess of the lung than in making further attempts at extraction?

(3) Is this a case for surgical interference and for direct removal of the pin from the lung by an intrathoracic operation?

My own opinion is that nothing further should be done, because as the patient is still in the best of health it is probable that the pin has become encysted and may give rise to no further trouble.

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The surgical view that foreign bodies in the lung always lead to an abscess is not necessarily correct, because if a patient keeps well in spite of having inhaled a foreign body, unless the fact is known and the case is X-rayed, as in this particular case, such a condition may never be suspected.

Dr. IRWIN MOORE: Mr. Hunter Todd's case relates to one of the few foreign bodies in the lungs which are out of reach of the bronchoscope. I understand that this pin has not yet been located by the bronchoscope, though it has been demonstrated by the X rays. It is evidently situated in a posterior branch of an inferior lobe bronchus, and the only endoscopic tube we have that can be used in a child of this age measures 13 in., and this would not pass along the smaller bronchi nor reach the pin. Mr. Somerville Hastings had a similar case at the Middlesex Hospital in 1912, where a child, aged four-and-a-half, aspirated a 2 in. shawl-pin into the lung. Many attempts at removal with the bronchoscope, even through a low tracheotomy opening, failed. A month later Mr. Kellock[1] performed pneumonotomy and successfully removed the pin. It was situated ¾ in. above the diaphragmatic surface of the lung. There was no associated empyema, and the child made a complete recovery. Chevalier Jackson, in his latest book on "Per-oral Endoscopy," refers to a few exceptional cases of failure which he has had, as beyond the limitations of bronchoscopy, and they were foreign bodies in a lower lobe bronchus, and out of reach. He considers that in such cases, if the foreign body is not extracted, an abscess always forms, sooner or later, and he records a case in which a pearl collar-button remained in the left bronchus for twenty-six years before abscess formation occurred.

Mr. NORMAN PATTERSON: I think the pin in Mr. Todd's case might be got at by doing a tracheotomy, and carrying out inferior bronchoscopy.

Dr. D. R. PATERSON (Cardiff): I agree with Mr. Norman Patterson as to the advantage of tracheotomy in these cases, because it enables one to get nearer the foreign body, and a larger tube can be used. For a really good search in the lower parts of the bronchus, tracheotomy gives great advantages. I have adopted it twice in cases of very small children. In one case I found removal to be impossible through the larynx, but after doing tracheotomy it was manipulated without the slightest difficulty.

The PRESIDENT: Has strapping the child to a board, and more or less inverting it, been tried? It could not do any harm.

Sir STCLAIR THOMSON: These are most interesting cases, and there are many lessons to be drawn from them. One would like to study the histories in detail. One lesson is the use of suction, which would be very useful in cases of bodies impacted in a secondary bronchus. The air behind it is absorbed, and in getting it out there is the negative pressure on the opposite side. A foreign body seems to slip out of our forceps, and in some cases we think it catches at the end of the bronchoscope or œsophagoscope: yet we know that if we go at it again and remove the whole *en masse*, we are much more successful. So now, when I feel I have seized the foreign body, I remove the whole thing *en bloc*, and in doing so, I think the suction made by withdrawing the tube helps us very much. I had a case in which I saw a pin projecting from a

[1] Thomas H. Kellock, "A Case of Pneumonotomy for Foreign Body," *Proc. Roy. Soc. Med.*, 1912, vi (Clin. Sect.), p. 64.

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secondary bronchus. I got hold of it; there was a gush of mucus, and I lost sight of it. I let go, and withdrew the tube, which was full of mucus. I wiped it, and went in again, but there was no pin to be found! I took out the tube to have a rest, and when I turned up the lights the pin was seen on the floor. It had come out with the first gush of mucus. We know that to break up peas in the lung is a deadly proceeding. With regard to Mr. Todd's case, has anyone used the electro-magnet for such a case? I have seen surgeons use it, and they said their object was to get the pin simply to shift its position. This might help to get the pin from the secondary bronchus to the primary bronchus.

Dr. W. Hill: Iglauer has used the electro-magnet, and found it useful for metallic foreign bodies which were non-impacted, but when they were impacted it did not shift them. So in America it fell into disrepute on account of failure in just those cases where it was required. With regard to the method of suction, I have shown a piece of chestnut, a portion of which was just projecting from a secondary bronchus. I could touch it with a sharp hook, but it would not come out. The patient was aged 13 months. I deliberately applied suction. I passed a glass tube down through the bronchoscope and connected the tube with a suction bottle. I got the piece out by this means, but on looking again into the bronchoscope I saw a second piece, which had dropped off the tube. At that moment the child gave an inspiration, and the second piece of chestnut disappeared from the endoscope, and went down the right bronchus. On following it up without cocainisation, there was a spasm and cough, and the piece was ejected against my spectacles. With regard to Mr. Todd's case, I suppose most of us will advise him to leave it alone, but I do not know whether it is good advice. If the patient gets bronchiectasis, it should be more easy to find.

Mr. Tilley (in reply): In answer to Dr. Paterson, I removed the safety-pins through Mosher's tube, with a distal light. In all endoscopic work I prefer distal illumination to the proximal light afforded by Brüning's instrument.

Mr. H. J. Banks Davis: Three or four years ago it occurred to me that using such an instrument as a magnet might enable one to remove these pins and needles. Several attempts to magnetise the fine gripping forceps were made for me by an electrical engineer, but, owing to the length of the instrument, it was found not possible to magnetise the tip —which after all is the most important part—but I do not see why this difficulty should not be overcome.

Dr. Kelson: With regard to blind instrumentation, an interesting case had just left the hospital. It was that of a man who, just before Christmas, had been eating nuts, when a piece of one stuck in his throat. He stated that on the following day, vigorous and painful instrumentation was used with a probang. On the next day he had a swelling in the neck, and eight days later he came to hospital with a big brawny swelling on the left side, and the left arytænoid and left ventricular band were much swollen. Nothing could be seen of the foreign body, though he was watched for a few days, and X-ray search made. I made an exploratory incision into his neck, and let out a lot of fœtid pus, and bare cartilage could be felt. The wound continued to discharge for some time, but after opening one or two other abscesses, it has now cleared up.

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Ethmoiditis causing Blindness.—G. W. Dawson.—Patient, a woman, aged twenty-seven, was sent to me by Mr. Kenneth Campbell on February 9, 1916. He reported optic neuritis of right eye, left eye slightly affected. For six weeks she complained of pain at the back of the eyes and across the bridge of nose; a small quantity of pus was seen in each olfactory cleft.

February 26: Eye report.—Right disc indistinct and pale; left, marked papillitis; elevation, 1½ D. She was almost totally blind and could only distinguish light and darkness.

February 26: Submucous resection of septum, which was thickened and deviated high up. Both ethmoids curetted and found to be necrosed.

In two days her vision was much improved, and on March 6 the ophthalmic surgeon reported a trace of neuritis. On March 31 Mr. Kenneth Campbell reported vision in each eye $\frac{6}{6}$.

Report of Two Cases of Mutton Bones impacted in the Œsophagus; Œsophagoscopy; Recovery.—Irwin Moore.—Case 1: *The Spinous Process of a Cervical Vertebra.*—In May, 1916, patient, aged sixty-two, came to the London Throat Hospital complaining that he had swallowed a piece of mutton bone four days previously. He was unable to swallow any hard food and even soft food caused vomiting. A radiogram, taken by Dr. Finzi, after a bismuth feed, outlined the foreign body about an inch above the level of the sternal notch. Under a general anæsthetic the following day an œsophagoscopic tube of 10 mm. diameter was passed, and the piece of bone was easily located lying across the œsophageal lumen. On passing forceps and attempting to seize the bone by its extremity in order to turn it into its narrower diameter, it was displaced and slipped 2 in. lower. While again applying the forceps through a 12 mm. tube, a paroxysm of retching occurred, due to light anæsthesia, and the bone was vomited up the œsophagoscope on to the patient's face. It measured 24 mm. (1 in.) in length, and 8 mm. ($\frac{5}{16}$ in.) in diameter.

Case 2: *The Transverse Process of a Cervical Vertebra with Bolus of Meat attached.*—Patient, a housemaid, aged forty, swallowed a piece of mutton bone on December 5, 1916, which stuck in her gullet. She was sent to a general hospital, where she was told there was nothing wrong; four days afterwards she returned, and a brush-probang was passed down the œsophagus; then she was again told that nothing was there and sent home. Because she was unable to swallow anything but liquid food, most of which was regurgitated, and because her breath had become very foul, she was advised to go to the London Throat Hospital. When first seen on December 8 her breath was extremely fœtid, this suggesting that sloughing had taken place. Her temperature was subnormal (96° F.). A radiogram was at once taken, and it showed a piece of bone impacted in the œsophagus at the level of the cricoid cartilage. The œsophagoscope was passed under general anæsthesia with great difficulty, owing to the patient having a short thick neck, contracted mouth, prominent teeth, and a very stiff jaw. The bone was seen and seized with forceps, but on account of its firm impaction with the surrounding œdema, ulceration, and bleeding—which kept the field obscured—the risk of doing further damage was considered, and attempts at removal postponed. Considerable difficulty also arose during the examination from cessation of breathing four times, and

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artificial respiration was found necessary. The condition of the œsophageal wall was probably due to the previous ill-advised attempts to use a bougie. On re-examination, two days later, a large piece of decomposed meat was discovered and removed by forceps. Further search was postponed on account of the patient's condition, which required artificial respiration on three occasions. At midnight the patient vomited up the bone during a coughing attack. It measured 25 mm. (1 in.) transversely, and 16 mm. ($\frac{3}{4}$ in.) in length, and consisted of the transverse process and portion of the body of a vertebra, with three sharp and jagged angles. Patient made a speedy recovery, and left hospital a week later.

Remarks.—In connection with the first case it is interesting to note that this is not the first instance of foreign bodies in the œsophagus or bronchi being expelled by vomiting or coughing while the œsophagoscope or bronchoscope were in position and covering the object. It may be useful in some cases to get rid of foreign bodies in this way by stimulating the laryngeal or pharyngeal reflexes during light anæsthesia. The second case was somewhat similar to one reported by Dr. D. R. Paterson, at a meeting of the Laryngological Section on December 3, 1915,[1] the measurements of the piece of bone being practically the same. In that case the patient unfortunately died from septic absorption, six days later, as the result of a lacerated œsophageal wall, probably caused by the previous attempts of a surgeon to pass a bougie. These cases exemplify the serious risks to the patient's life from an impacted bone, and the danger which may follow the use of a bougie; also the importance of an examination by X rays of all cases in which a foreign body is said to have been swallowed. The great advantages of œsophagoscopy cannot be too frequently emphasised.

Infiltration and Ulceration of Vocal Cords; Malignant?—W. H. Jewell.—E. H. W——, male, aged fifty-three, became hoarse eighteen months ago, and has continued so. He has been a heavy smoker and drinker for thirty years. He has never had any pain, expectoration, difficulty in swallowing, or hæmorrhage. His septum is deflected. Wassermann reaction negative. The anterior extremities of the cords adjoining the anterior commissure have a yellowish glazed appearance, and behind this the left cord is swollen and abraded for the greater part of its extent. The margins of the cords do not meet posteriorly on phonation.

Dr. Jobson Horne: The disease, I think, is malignant. It may be more extensive than the mirror would show. The case should be closely watched, and the position of affairs stated to the man, so that he may decide whether he will have the part involved removed as a precautionary measure, or leave it alone. The patient, I understand, has been taking iodide of potassium with some slight benefit.

Mr. Clayton Fox: I think it is hypertrophic laryngitis. There is a similar thickening of the opposite cord, more anteriorly, and the man has suffered from marked nasal obstruction, and is working in dusty surroundings. The cord in question is quite mobile, and if it were what it is said to be, with that infiltration, there would, surely, have been some sluggishness in the cord by this time. I have seen a similar case recently which was diagnosed as laryngitis tuberosa. There was fibroid thickening, but the cord has now cleared up entirely under treatment.

[1] Journ. of Laryngol., Rhinol., and Otol., xxxi, pp. 149–150.

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Mr. FRANK ROSE: I think there is severe laryngitis in this case, but the localised lesion on the left cord is, to my mind, highly suggestive of malignant disease. I should watch the lesion very closely, and if there is evidence of increase in size, I would recommend that the cord be removed.

The PRESIDENT: The case is very suspicious.

Abstracts.

PHARYNX.

Hemiplegia after Tonsillectomy.—William A. Scrutan. "The Laryngoscope," February, 1917, p. 96.

Scrutan records a case of a girl, aged eleven, on whom tonsillectomy was performed under general anæsthesia on July 10, 1915. A small portion of the tonsil was left at the lower end of the left fossa, but was removed later by means of the forceps and snare. Hemiplegia on the left side was noted on the following morning, and the patient was reasonably certain that the paralysis existed when she recovered from the anæsthetic. The temperature rose to 101·8° F. during the forty-eight hours following the operation, and the return to normal extended over a number of days. Recovery from the paralysis began within seventy-two hours in the leg, and shortly afterwards in the arm. In two weeks the child began to walk about the ward, and a month later left the hospital without assistance. Scrutan thinks that the hemiplegia was probably due to embolism. The operation was performed under his direction by a man seeking instruction, and lasted twenty-five minutes. The piece of gland left by the tonsillitome had to be fished for repeatedly so that there was considerable traumatism and an unusual amount of vigorous sponging in the fossa which may have caused dislodgment of a clot into the circulation. Six months after operation the leg seemed to have entirely recovered, but a condition of athetosis existed in the foot. The arm also recovered control of all movements, but the execution was slow and athetosis was observed in the hand. The face still showed paralysis at the angle of the mouth. *J. S. Fraser.*

Treatment of Adhesions of the Soft Palate by a Silver Plate Method.—Hazlehurst. "Laryngoscope," July, 1917, p. 574.

Hazlehurst states that tertiary syphilis is the most common cause of adhesions of the soft palate to the posterior wall of the pharynx. The condition is relatively frequent in the hereditary form of the disease. Rhinoscleroma, diphtheria, lupus, and pemphigus are rare causes of the condition. Traumatic adhesion may follow operation for adenoids. Complete adhesion is rare. The nasopharynx may be more or less filled with fibrous bands, which at operation are broken down or cut through with difficulty. The symptoms are largely those of nasal obstruction, and vary according to the extent of the lesion. Treatment is mainly directed, after loosening or cutting through the adhesions, towards preventing re-adhesion. Hazlehurst's technique is as follows: Ether anæsthesia through the peroral intubation tube; division of the adhesions, keeping as close to the posterior wall of the pharynx as possible; separation of adhesions in nasopharynx by means of instruments or the finger. A

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