

2

146 JULY 26, 1924]

AN UNUSUAL CASE OF BILATERAL RENAL CALCULUS.

[THE JOURNAL OF MEDICAL RESEARCH]

mouth and endeavored to push it on, as he felt it had gone too far to bring it up into his mouth again, he succeeded in getting the tooth-plate on down his windpipe and, having done so, his sensation of choking passed off and he felt easier at once. On admission to hospital at Graham soon after he complained of pain in the right side of the chest, and a certain amount of dyspnea with expiratory cough. A radiogram taken at once showed the shadow of a tooth plate on the right side of the chest at about the level of the sixth rib. He was transferred to Millbank and arrived the following day.

A further radiogram was taken and revealed the tooth-plate still in the position described at Graham (Fig. 1, special plate). Operation was decided upon at once, and the patient was placed under general anesthesia and a bronchoscope introduced with great difficulty into the trachea, the difficulty being due to the adhesion of the aryepiglottic folds and surrounding tissue, this adhesion, together with the large amount of secretion in the trachea, decided me to do a low tracheotomy and thereby obtain a direct view. This was done at once, and, on introducing a medium size tube, the tooth-plate was located in the right bronchus about three quarters of an inch beyond the bifurcation of the trachea, alligator forceps were introduced and one end of the tooth plate gripped, but on pulling it was found that the hook on the tooth plate (shown in the radiogram) had perforated the bronchial wall, and the bronchus came up with the foreign body. Several further attempts were made to rotate the plate, but failed, and as the patient's condition was not too good he was put back to bed with a tracheotomy tube left in the trachea.

Dr. Wargitt, consulting physician to the hospital, was called in to see the case, when further radiogram was taken and showed that the foreign body had been moved about an inch and now lay in a position nearer the mid-line and more vertically than in the first radiogram.

Note at Mr. Wargitt.

On April 28th the patient was in good condition, the temperature had fallen to normal after a post-operation rise. He had no dyspnea while sitting quietly in bed and breathing by the mouth. An anti-toxin post-operative serum taken a few hours previously showed the tooth-plate lying in an almost vertical position a little to the right of the middle line at the level of the spinal vertebrae of the fifth and sixth ribs—a position very suggestive of impaction in the esophagus. Scanning in the left antero-lateral position proved Major Fife's diagnosis to be correct, and the skiagram (Fig. 2) showed the foreign body lying well in front of the esophagus and abnormally in the right bronchus. With the advice of Mr. Fife and Mr. E. H. Davis I operated in the sitting position and without general anesthesia. On removal of the lung tubes tube which had passed into the right bronchus along the foreign body, about an ounce of foul pus was coughed up. After examination of the cavity and allowing the bronchus, passed through the tracheotomy wound, to remain for a minute, while tubercle was established, it was cast, after washing, in the tooth plate with its single false tooth lying just below the level of the top of the right bronchus, and the gateway back again for half an inch, but not greatly so. There was no sign of trauma. With the lung bronchoscope forceps the foreign body was rotated gently on its long axis, disengaged and withdrawn, the chest slightly raised, and the tracheotomy wound.

Recovery was free from fever or serious pulmonary symptoms.

COMMENT BY MR. WARGITT.

The plate measured over an inch and a half (4 cm.) in length, over three quarters of an inch (2 cm.) in breadth, and almost the same in height (Fig. 3). The patient, a man of slight build and about 5 ft. 10 in. in height, showed me, when examined a week later, a larynx not at all remarkable for size. The epiglottis was strongly curved, containing the plate during normal respiration. The patient reported that he felt the dental plate pass into the throat, stick there, and render breathing impossible. Finding this it had descended too far for extraction, he decided to push it down with his finger. I have little doubt that his finger reached no farther than the epiglottis, pressure upon which pushed the large hook and tooth-bearing portion through the glottis. As I learnt from the self-control and tolerance which he displayed at the time of the extraction, the patient was a man quite capable of performing this trying feat, which presumably saved his life, for as soon as the foreign body had passed the glottis all difficulty of breathing ceased.

The practical value of a record such as this is to draw attention once more to the danger inherent in the wearing of dental plates of small size. Such plates not infrequently are swallowed, and, becoming impacted in the esophagus,

have to be removed through the esophagoscope. It is true that this method is a good deal safer than oesophagotomy, but it is by no means free from danger, involving, as it frequently does, the disengagement of staff wire-hooks from the damaged wall of the gullet. Occasionally such plates have to be secured *in situ* with a cutting instrument before extraction is possible, and that maneuver can be extremely difficult if grave damage is to be avoided. In the case here recorded nothing but an unusual degree of presence of mind on the part of the patient prevented immediate death by suffocation.

AN UNUSUAL CASE OF BILATERAL RENAL CALCULUS.

Borrowing Library		DATE OF REQUEST 8/3/73	
CALL NO.		BORROWING LIBRARY (address in full)	
DHEW, PHS, Food and Drug Administration Medical Library, Room 11B-40 (BD-45) 5600 Fishers Lane Rockville, Maryland 20852			
FOR USE OF Kirschstein		STATUS	
AUTHOR (or periodical title, vol and year)		DEPT	
Brit. Med. J., vol. 2, 1924			
TITLE (with author & pages for periodical articles) (inc edition, place & date)		This edition only	
Cooke, W.E.: Fibrosis of the lungs due to the inhalation of asbestos dust. 147 to end		stop	
VERIFIED IN (or source of reference)			
IF NON CIRCULATING, PLEASE SUPPLY ☐ MICROFILM ☐ HARD COPY IF COST DOES NOT EXCEED \$			
LENDING LIBRARY (address in full)		NLM	
NOTE: The receiving library assumes responsibility for notification of non receipt.		AUTHORIZED BY (full name) Elizabeth H. Manning	

Pensions Board, Detroit, on account of pay and cost in connection with a certain degree of lungitis, but there was no history of true renal colic. A skiagram was taken of the chest region, which showed the wire still in position fixing the third and fourth cervical vertebrae. There was free movement of the neck in all directions without pain or discomfort, and the patient was actively employed up to this time in the engineering department of the South African Railways in Bloemfontein. This skiagram is reproduced (Fig. 1). The patient was admitted to the Johannesburg Hospital under my care on October 19th, 1923. A skiagram of the lumbar region by Dr. William Stewart, who also took a cervical skiagram, showed large masses of calculi in both renal areas (Fig. 2). The urine contained pus, but not in great quantity, was faintly alkaline, 0.77 per cent. urea, and about 65 cc. were passed in moderate degree of cystitis. Indigo-carmine was delayed in its appearance, taking three hours for the first indication from the left ureter, and on a subsequent re-administration of the right ureter was still more delayed, but the actual time was not accurately determined. Operation was advised, and the patient left hospital for a while, to be readmitted on November 2nd, 1923. On this occasion the urine showed a specific gravity of 1004, was alkaline, with a trace of albumin, glucose, about pus and erythrocytes, urea 0.8 per

JULY 26, 1924]

MEMORANDA.

[THE JOURNAL OF MEDICAL RESEARCH] 147

cent. The blood urea was 46 mg. per 100 ccm. There were no clinical symptoms of renal inadequacy, no thirst or head ache, and the tongue was fairly clear. The patient, though thin, was in fair condition, and had been at work till shortly before admission.

On November 11th, the left kidney being judged the better of the two, nephrotomy was done on that side through an oblique lumbar incision, and masses of branched phosphatic calculi were removed through a vertical incision in the kidney through pouched and thinned out tissue, opening into the calyces which contained the calculi, 55 drachms were thus removed, and the renal area drained. The upper third of the kidney was that chiefly involved, and the remainder showed sound secreting tissue. The patient made an uneventful recovery from this operation, and left hospital feeling well on December 11th.

He returned to his home in Bloemfontein, and was re-

ceived, and 40 per cent. of SiO_2 , silica. The mineral fibres are quite translucent except at the fractured ends, where some change takes place, the fibre becoming blackened and fragmented. Asbestos dust, no matter from what part of the process it is collected, contains these blackened particles in large amounts (see photo-micrograph).

A woman, aged 33 years, had worked in asbestos factories since the age of 15, but for five years previous to her finally leaving work in July, 1922, her attendance at the factory had been intermittent. She died on March 15th, 1924. Mr. E. N. Moleworth, coroner for Bechuanaland, at the suggestion of Dr. Markovitch, who performed the necropsy, sent the lungs for further examination.

An x-ray plate showed extensive fibrosis, more marked in the right lung, two calcareous glands at the root of the left lung, and two small calcareous particles in the base of the left lower

INTERLIBRARY LOAN REQUEST
ACCORDING TO THE A. I. A. INTERLIBRARY LOAN CODE

REPORTS: CHECKED BY

SENT BY ☐ LIBRARY RATE ☐
CHARGES \$ ☐ INSURED FOR \$ ☐
DATE SENT ☐
DUE ☐

RESTRICTIONS:

☐ COPYING NOT PERMITTED
☐ FOR LIBRARY USE ONLY

NOT SENT BECAUSE:

☐ NON CIRCULATING ☐ NOT OWNED ☐ IN USE

ESTIMATED COST OF MICROFILM:

HARD COPY ☐

BORROWING LIBRARY RECORD:

DATE RECEIVED ☐
DATE RETURNED ☐
BY ☐ LIBRARY RATE ☐
POSTAGE ENCLOSED \$ ☐ INSURED FOR \$ ☐

RENEWALS (REQUEST AND REPORT ON SHEET C)

REQUESTED ON ☐
RENEWED TO ☐
(OR PERIOD OF RENEWAL)

piece. Appearance is thickened over the entire surface, the remains of these adhesions to the pleura are firm and small. The lung is larger than normal, and on the right capsule, and some calcareous lung is seen to be fibrosed and to a lung tissue being replaced by fibrous tissue. The middle and lower lobes showing in size from a hard nut to a some of which have proceeded to be dilated.

is thickened and shows the remains of the right lung. The lung is firmer of the lung are two large calcareous large hard nut, the other about half along glands. The other glands are discolored. On section the lung tissue is more than normal. In the left apex is tissue about the size of a strawberry of a nut. Scattered throughout of dense consistency than the rest of the lung, dilute calcareous particles. This is a considerable increase

extensive fibrosis, causes face and us walls. Giant cells are numerous and tubercle bacilli are present in some condition, but the fibrosis is as in the chronic cases, and in the thickening of normal matter. There is a large impurity here sharp angles, 5 to 6 microns in length. The photomicrographs and shapes. The laminae and fibrous epithelium has extensive peribronchovascular fibrosis

memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

LYMPHOSARCOMA OF THE TONSIL REMOVED BY SURGICAL GUILLAIN EXCISION.

Examination of the tonsil glands was rapidly, and when removed so completely, no given case to multiple leukemic tumours, that I wish to report one case where removal has so far been followed neither by local recurrence nor by remote metastatic disaster, though twenty months have passed since the operation.

In October, 1924, I was asked to see a lady, aged 72, who was able to swallow fluids only, and complained of pain in the throat, shooting to the left ear, severe enough to prevent sleep. The left tonsil had also been touched the opposite side of the throat. It was very hard and smooth, and was covered with a thick, white, cheesy mass, which contracted viscidly with the almost white, yellowish, and granular growth. At the base of the tumour there was a ragged, crater-shaped, acutely sensitive ulcer the size of a three penny piece. The tumour was very movable and no glands could be felt.

She told me that in 1877, when 27 years of age, a sharp fragment of mutton bone had come fixed in her left tonsil, causing much pain, swelling, and inflammation. A nurse practitioner, attempted its removal, but at the end of several weeks it came away without

mouth and endeavored to push it on, as he felt it had gone too far to bring it up into his mouth again, he succeeded in getting the toothplate on down his windpipe and, having done so, his sensation of choking passed off and he felt easier at once. On admission to hospital at Graham soon after he complained of pain in the right side of the chest, and a certain amount of dyspnea with expectant cough. A radiogram taken at once showed the shadow of a toothplate on the right side of the chest at about the level of the sixth rib. He was transferred to Millbank and arrived the following day.

A further radiogram was taken and revealed the tooth plate still in the position described at Graham (Fig. 1, special plate). Operation was decided upon at once, and the patient was placed under general anaesthesia and a laryngoscope introduced with great difficulty into the trachea, the difficulty being due to the sedation of the anæsthetic and the surrounding tissues, this sedation, together with the large amount of secretion in the trachea, made it difficult to do a low tracheotomy and thereby obtain a clear view. This was done at once, and, on introducing a medium size tube, the toothplate was located in the right bronchus about three-quarters of an inch beyond the bifurcation of the trachea, alligator forceps were introduced and one edge of the toothplate gripped, but on pulling it was found that the hook on the toothplate (shown in the radiogram) had perforated the bronchial wall, and the bronchus ran up with the foreign body, several further attempts were made to rotate the plate, but failed, and as the patient's condition was not too good he was put back to bed with a tracheotomy tube left in the trachea.

Dr. Waggett, consulting laryngologist to the hospital, was called in to see the case, when further radiograms were taken and showed that the foreign body had been moved about an inch, and now lay in a position nearer the midline and more vertically than in the first radiogram.

NOTE BY MR. WAGGETT

On April 28th the patient was in good condition. His temperature had fallen to normal after a post-operative fever. He had no dyspnea while sitting quietly in bed and breathing by the mouth. An antero-posterior skiagram taken a few hours previously showed the tooth plate lying in an almost vertical position a little to the right of the middle line at the level of the spinal articulations of the fifth and sixth ribs—a position very suggestive of impaction in the oesophagus. Success in the left ureter to later a post-operative fever's diagnosis to be correct, and the skiagram (Fig. 2) showed the foreign body lying well in front of the oesophagus and close to the right bronchus. With the assistance of Mr. E. D. Davis I operated in the sitting position, and without general anaesthesia. On removal of the long rubber tube which had passed into the right bronchus, the foreign body, about an ounce of four lbs. was coughed up. After consumption of the rubber tube and allowing the bronchus to pass, the patient was bathed and allowed to remain for a minute with tracheotomy established. It was easy, after swallowing, to see the toothplate with its single false tooth lying just below the level of the top of the right bronchus, and the gold wire hook hidden for half its length in the upper lobe of the bronchus. The mucosa was red and swollen, but not greatly inflamed. There was no sign of trauma.

With "ham" bronchoscopic forceps the foreign body was rotated gently on the long axis, disengaged, and withdrawn, the chief difficulty arising at the tracheotomy wound.

Recovery was free from fever or serious pulmonary symptoms.

COMMENT BY MR. WAGGETT.

The plate measured over an inch and a half (4 cm.) in length, over three-quarters of an inch (2 cm.) in breadth, and almost the same in height (Fig. 3). The patient, a man of slight build and about 5 ft. 10 in. in height, shrank me when examined a week later, a larynx not at all remarkable for size.

The epiglottis was strongly curved, concealing the glottis during normal respiration. The patient reported that he felt the dental plate pass into the throat, stick there, and descended too far for extraction, he decided to push it down with his finger. I have little doubt that his finger reached no further than the epiglottis, pressure upon which pushed the huge hook and tooth-bearing portion through the glottis. As I learnt from the self-centred and tolerance which he displayed at the time of the extraction, the patient was a man quite capable of performing this trying feat, which presumably saved his life, for as soon as the foreign body had passed the glottis all difficulty of breathing ceased.

The practical value of a record such as this is to draw attention once more to the danger inherent in the wearing of dental plates of small size. Such plates not uncommonly are swallowed, and, becoming impacted in the oesophagus,

have to be removed through the oesophagoscope. It is true that this method is a good deal safer than oesophagotomy, but it is by no means free from danger, involving, as it frequently does, the disengagement of sharp wire-hooks from the damaged wall of the gullet. Occasionally such plates have to be severed *in situ* with a cutting instrument before extraction is possible, and that manoeuvre can be extremely difficult if grave damage is to be avoided. In the case here recorded nothing but an unusual degree of presence of mind on the part of the patient prevented immediate death by suffocation.

AN UNUSUAL CASE OF BILATERAL RENAL CALCULUS.

BY

II. TEMPLE MURSELL, OBE, MB, F.R.C.S.,

HONORARY SURGEON, JOHANNESBURG HOSPITAL.

(With Special Plate.)

The following case presents many features of unusual interest, and may therefore be worthy of record.

The patient, a young man, aged 27, came first under notice in 1915, when he was admitted to No. 1 General Hospital, Natal, South Africa, from German West Africa, where he was serving as a private in a Natal field hospital. Six weeks prior to his admission to Natal he had been working on the sea at Luderitz, and sustained an injury to his back, which subsequent investigation proved to be a dislocation between the third and fourth cervical vertebrae.

The loss of sensation to the lower limbs was complete, and the loss of the nerve area below the level of injury. Breathing was solely diaphragmatic, there was paralysis of bladder and rectum and extensive bedsores over the sacrum. There was doubling of urine and severe cystitis. The condition seemed hopeless. However, Dr. Lindsay Sandes of Capetown and the medical staff of the hospital, who were called in to see the patient, decided to attempt recovery, and they carried out the following operation. An incision was made in the midline of the neck as far as the third and fourth cervical vertebrae. An attempt was made to reduce this, but without success, and accordingly the superior articular process of the fourth cervical vertebra was removed, and thereafter the reduction was easily effected. A stout silver wire was passed through the spinous processes of the third and fourth cervical vertebrae and tightly twisted up. The wound was closed and the head and neck immobilized. Complete recovery slowly took place, and three months later the patient was walking about, and resumed his post for discharge in Natal. He subsequently served again in German West Africa, and also with a unit in Europe.

The case up to this point was well worthy of record, but the subsequent developments in the urinary tract are those with which this record is more immediately concerned.

In October, 1923, the patient was sent to me by the Military Personnel Board, Pretoria, on account of pain and blood in the urine and a certain degree of lumbar pain, but there was no history of the renal colic. A skiagram was taken of the cervical region, which showed the wire still in position from the third and fourth cervical vertebrae. There was free movement of the neck in all directions without pain or discomfort, and the patient was actively employed up to this time in the engineering department of the South African Railways in Johannesburg. This skiagram is reproduced (Fig. 1).

The patient was admitted to the Johannesburg Hospital under my care on October 19th, 1923. A skiagram of the lumbar region by Dr. William Stewart, who also took the cervical skiagram, showed large masses of calculus in both renal areas (Fig. 2). The urine contained pus, but not a great quantity, was fairly alkaline, 0.77 per cent. urea, and about 65 or more passed in twenty-four hours.

Cystoscopy showed a moderate degree of cystitis. Indigo-carbinol was introduced into the bladder, and on a subsequent catheterization of the right ureter was still more delayed, but the actual time was not accurately determined. Operation was advised, and the patient was sent to the hospital for a while, to be readmitted on November 2nd, 1923. On this occasion the urine showed a specific gravity of 1004, was alkaline, with a trace of albumin, glucose absent, pus and epithelial cells, urea 0.8 per

cent. The blood urea was 46 mg. per 100 c.c. There were no clinical symptoms of renal inadequacy, no thirst or headache, and the tongue was fairly clean. The patient, though thin, was in fair condition, and had been at work till shortly before admission.

On November 8th, the left kidney being judged the better of the two, nephrostomy was done on that side through an oblique lumbar incision, and masses of branched phosphatic calculi were removed through a cortical incision in the kidney through pouched and thinned-out tissue, opening into the calyx which contained the calculi. Six calculi were thus removed, and the renal area drained. The upper third of the kidney was that chiefly involved, and the remainder showed some seeping tissue. The patient made an uneventful recovery from this operation, and left hospital feeling well on December 11th.

He returned to his home in Bloemfontein, and was readmitted to hospital on January 11th, 1924, for operation on the right side. The left lumbar wound had healed well. On this occasion the urine from the bladder showed 12 per cent. urea—marked improvement upon the previous occasion; the left kidney area was 1.1 per cent., the blood urea was, as before, 46 mg. per 100 c.c. Cultivations from the left kidney showed no organisms, there was a scanty growth of a streptococcus from the bladder urine. Indigo-carbinol appeared from the left in thirty minutes with a free urinary secretion. From the right side there was a rapid rhythmic secretion of a purulent urine, indigo-carbinol appearing in fifty minutes.

On January 28th a right lumbar oblique incision was made, and a much scarified kidney was exposed, the scutellum being mainly in the upper pole. Masses of phosphatic calculi, weighing 11 drachms 50 grains, were removed through a cortical incision in the thinned-out upper pole pouch. This left a large flabby upper sac leading to the calyx, which had contained the calculi. As the walls of this sac showed no evidence of seeping tissue, and it seemed only too probable this portion of the kidney would never heal, and only have a persistent fistula, the sac was completely incised longitudinally, some deep mattress sutures of gut being used for haemostasis, and the edges then approximated as accurately as possible, but room for drainage being allowed for. The kidney area is drained, the tube passing down to, but not into, the renal substance. The tube was removed in forty-eight hours and replaced by a small gauze drain. Hardly any leakage occurred.

Except for an attack of malaria and dysentery, from which the patient had previously suffered in East Africa, no untoward event marred his recovery. On March 1st the patient walked a distance of a mile to report himself, he had then no urinary symptoms, and the urine contained only a very small amount of pus and under haematuria and acid sodium phosphate was acid to reaction.

The case can be taken to be definitely in ascending urinary infection from the original cervical injury, with resultant formation of calculi on both sides. There is no positive evidence to show exactly when calculi were first formed, but as a medical board, held in 1917 in England, stated that the patient had bilharzia, one can assume he then had haematoma, though there was no evidence adduced to prove that he had bilharzia—that is, there was no statement that ova had been found. It seems rather to have been assumed because the patient came from South Africa.

The resection of the upper pole of the right kidney proved quite successful, and was well worthy of adoption in cases of similar type. The chances of recurrence of the calculi are considered, but there is reason to hope that this may be prevented by keeping the urine and by means of drugs and diet.

The resection of the upper pole of the right kidney proved quite successful, and was well worthy of adoption in cases of similar type. The chances of recurrence of the calculi are considered, but there is reason to hope that this may be prevented by keeping the urine and by means of drugs and diet.

FIBROSIS OF THE LUNGS DUE TO THE INHALATION OF ASBESTOS DUST.

BY

W. E. COOKE, M.D., F.R.C.P., D.P.H.,

PATHOLOGIST, VICAR STREET.

(With Special Plate.)

The following case is of importance because it is the first in English medical literature to be definitely proved.

Medical men in areas where asbestos is manufactured have long suspected the dust to be the cause of chronic bronchitis and fibrosis, and Prof. J. M. Beattie has shown that the dust causes fibrosis in guinea-pigs. Asbestos contains, amongst other compounds, calcium and magnesium

silicates, and 40 per cent. of SiO_2 , silica. The mineral fibres are quite translucent except at the fractured ends, where some change takes place, the fibre becoming blackened and fragmented. Asbestos dust, no matter from what part of the process it is collected, contains these blackened particles in large amounts (see photo-micrograph).

A woman, aged 33 years, had worked in asbestos factories since the age of 15, but for five years previous to her finally leaving work in July, 1922, her attendance at the factory had been intermittent. She died on March 15th, 1924. Mr. E. N. Moleworth, coroner for Bechuanaland, at the suggestion of Dr. Mackintosh, who performed the necropsy, sent the lungs for further examination.

An x-ray plate showed extensive fibrosis, more marked in the right lung, two calcareous glands at the root of the left lung, and two small calcareous particles in the base of the left lower lobe.

Macroscopical Appearance

Right Lung.—The pleura is thickened over the entire surface of the lung, and shows the remains of dense adhesions to the chest wall and pericardium. The lung is firm and small. The glands at the root of the lung are larger than normal, and on section are black, show a thickened capsule, and some calcareous particles. On section the lung is seen to be fibrosed and to a large extent atelectatic, the lung tissue being replaced by fibrous tissue. In the apex there is a large cavity, the size of a polo ball. The middle and lower lobes show numerous small areas—varying in size from a hard nut to a pin's head—of cavitation, some of which have proceeded to cavitation. The bronchi are dilated.

Left Lung.—The pleura is thickened and shows the remains of adhesions to the chest wall. The thickening and adhesions are not so marked as in the right lung. The lung is firmer than normal. At the root of the lung are two large calcareous masses, one the size of a large hazel nut, the other about half that size—calcareous tuberculous glands. The other glands are black, and show a thickened capsule. On section, the lung tissue shows greater resistance than normal. In the left apex there is an area of old scar tissue about the size of a cigarette paper, and a cavity the size of a walnut. Scattered throughout the lung are small areas of denser consistence than the rest of the lung, some of which show definite calcareous particles, others small areas of cavitation. There is a considerable increase in the fibrous tissue.

Microscopical Appearance

The right lung shows extensive fibrosis, extensive foci, and cavities with thick fibrous walls. Giant cells are numerous around the cavities, and tubercle bacilli are present. The left lung shows the same condition, but the fibrosis is not so extensive.

In sections of both lungs, in the cavous areas, and in the fibrotic parts, are seen particles of mineral matter. These are of various shapes, but the large majority being sharp and angular. The size varies from 205 to 3 microns in length. The photo-micrograph illustrates the sizes and shapes. The lymphatic glands show peritonitis and fibrosis. The bronchi are dilated, the lining epithelium has disappeared, and there is extensive peribronchial fibrosis.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

LAMPHOSARCOMA OF THE TONSIL REMOVED BY SLUDER'S GUILLOTINE ENCAUTION.

Lamphosarcoma of the tonsil grows so rapidly, and when removed so commonly returns, or gives rise to multiple leukemic tumours, that I wish to report one case where removal has so far been followed by neither local recurrence nor by remoter metastatic disaster, though twenty months have passed since the operation.

In October, 1922, I was asked to see a lady, aged 72, who was able to swallow fluids only, and complained of pain in the throat, shooting to the left ear, severe enough to prevent sleep. The left tonsil was enlarged and almost touched the opposite side of the fauces. It was very hard and smooth, and was covered with a coat of festooned veins, which contrasted vividly with the almost pure white of the underlying growth. At the upper pole of the tumour there was a large, cone-shaped, equally firm, movable nodule the size of a plum pitting. The tumour was very movable, and no glands could be felt.

She told me that in 1877, when 27 years of age, a sharp fragment of mutton bone became fixed in her left tonsil, causing much pain, swelling, and inflammation. A young practitioner attempted its removal, but at the end of several weeks it came away without