The Medical and scientific archives of the Adelaide Hospital. no. 7 (for the year 1927.)

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THE

MEDICAL AND SCIENTIFIC ARCHIVES

OF THE

ADELAIDE HOSPITAL.

No. 7 (for the year 1927.)

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CONTENTS.

CONTENTS—*continued.*

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This is the seventh issue of the Archives and contains records of various cases considered of importance or interest, as well as a tabulation of certain lesions found during the course of one thousand autopsies.

The Archives are proving of considerable use to the staff as a means of recording cases of value which otherwise would be lost to sight, and it is felt that this compilation of data is of service also to investigators outside the Adelaide Hospital.

The appointment of a Pathological Registrar in addition to the Medical and Surgical Registrars has enabled more work to be done in connection with this branch of hospital work, and more complete records compiled. The three Registrars have materially helped the Editorial Committee in the preparation of the Archives, and the Committee are indebted to them for their assistance.

The Committee appreciate the support given to the Archives by the Inspector-General of Hospitals and the other members of the Board of Management, and value the kindly interest they have given to this publication.

I.—HYDATID DISEASE.

1. DEGENERATED HYDATID CYSTS IN THE TISSUES OF THE BACK, SECONDARY TO HYDATID DISEASE OF THE LUNGS.

(Under the care of Dr. I. B. Jose, Honorary Assistant Surgeon.)

Mrs. M. W., *aet.* 67, was admitted on the 14th August. She had been attending the Outpatients' Department, and had complained of two lumps in her back, which latterly had become painful. Fourteen years previously she had noticed the presence of a lump on the right side of the back, just below the shoulder blade. She had had a nasty cough at this time, and had been treated for chest trouble. The lump had very gradually increased in size since she first noticed it. She had had no pain associated with it. Three months ago another lump had appeared just above the first one—it had increased in size, and was causing a lot of pain. On examination of the back two tumors were present. The larger—about 5in. in diameter—was situated just below the angle of the right scapula. It was smooth and soft, and had the characteristics of a lipoma. The smaller tumor was situated just below the rhomboid muscles, on the right side. It was tense and firm to the touch, and fixed to the deeper structures. On account of the rapidity of growth and the pain, it was thought to be of a malignant nature. The general examination of the patient was negative. Operation was performed on the 15th August. An incision in the line of the rib was made over the upper tumor, and on dissecting it from its surroundings it was found to be a cystic swelling, with a pearly capsule and very tense walls. It was incised, and hydatid fluid and daughter cysts were evacuated. The cyst had orginated within the chest wall, and reached the surface by extending through the fourth intercostal space. The lower tumor was also a hydatid cyst, which had undergone advanced degenerative changes. It was attached by its outer connective tissue capsule to the other cyst, but the cavities did not intercommunicate externally. It had pierced the parietes through the fifth intercostal space. A portion of the fifth rib was excised, and the cysts were seen to communicate internally. More daughter cysts were evacuated, and the main cyst was explored and found to extend as far back as the vertebrae. The pleural cavity was not opened. A drainage tube was inserted, and the wound loosely closed. The patient made an uneventful convalescence, and was discharged from hospital to a private hospital ten days later. A radiograph of the chest was unsatisfactory, and was not repeated, as the patient was leaving hospital.

II.—MEDICAL CASES.

1. DILATATION AND HYPERTROPHY OF THE HEART, FOLLOWING GREAT MUSCULAR EFFORT. LATER, CEREBRAL EMBOLISM FROM THROMBOSIS IN THE LEFT VENTRICLE.

(Under the care of Dr. Hone, Honorary Physician.)

C. S., a male, *aet.* 42, was admitted on March 29th, complaining of shortness of breath, palpitation of the heart, and occasional swelling of the legs ever since an accident 12 months before, when two bales of wool fell on his shoulders, and he made great efforts to free himself. He was treated in this hospital nine months ago, and left, relieved, after seven weeks. He had been able to get about until eight

weeks ago, when he developed a "cold" and pains in the right side of the chest, with a cough and bloodstained sputum. The shortness of breath and palpitation had been worse during the last eight weeks. Venereal history was denied. On admission, his temperature was 97.6°, pulse rate 130, respirations 36, and blood pressure 115/95. He had a malar flush, and was in some respiratory distress. He wandered in his speech, and did not answer questions directly. Examination of the heart showed the apex beat to be in the sixth space, half an inch outside the nipple line. The right border of the heart extended half an inch to the right of the sternum. The sounds were rapid and distant, but no bruits were detected. There was canter rhythm along the lower border of the heart. There were pulsations in the upper part of the abdomen synchronous with the heart beat. There was no oedema of the legs, but a slight lumbar pad was present. The urine contained a considerable amount of albumen. Five days after admission the patient was noticed to look "strange." His eyes were turned to the right, and he moved his head when looking at anything, keeping his eyes well over to the right. He was quite conscious, but his speech was rather strange. It was found that the patient could not turn his eyes to the left. There were no signs of any other paralyses. Later in the evening the left arm became weak. The following day his condition was unchanged. A lumbar puncture was performed, and 25 c.c. of clear fluid under pressure were obtained. The next day the patient could turn his eyes to the left with an effort, preferring to move his head. Visual acuity seemed very poor. His general condition gradually became worse, and he died on April 19th.

Autopsy No. 49/27 (*J. B. Cleland*).—There was oedema of the legs, a little fluid in the right pleura, and some adhesions over both lungs. The heart weighed 24ozs., and there was great hypertrophy and dilatation of all its chambers. Both tricuspid and mitral orifices admitted five large fingers. The endocardium of the greatly dilated and somewhat hypertrophied left auricle was opaque. There were no valvular lesions of importance, except two or three small athermatous plaques in the aortic cusp of the mitral. There was no evidence of rupture of any cusps. At the apex of the left ventricle there were two or three yellow ante-mortem clots projecting from the diverticula between the hypertrophied muscle strands. One of these was cone-shaped, and projected into the cavity of the ventricle for a distance of about three-quarters of an inch. The coronary vessels were both unduly large, especially the right one, and their orifices were patent. There was no atheroma of the aorta. The liver showed advanced chronic venous congestion. In the left kidney there were two small infarcted patches, as well as chronic venous congestion. There were infarcts in both lungs, 1in. to 1½in. in diameter. The vessels at the base of the brain were healthy. On opening the brain a degenerated area with haemorrhage was present in the right lenticular nucleus in its upper part, and opposite to it across the internal capsule in the caudate nucleus was a further patch of degeneration, with haemorrhage extending to the floor of the lateral ventricle. The left popliteal vein was filled with a large dark-red thrombus, which was slightly adherent to the wall, and extended to the branches.

Comment.—The patient's age was 42. The kidneys showed no evidence of fibrosis, and there was no valvular defect in the heart, and yet the heart was greatly dilated and hypertrophied, weighing 24oz. His shortness of breath, palpitation, and other suggestive symptoms appeared to have followed an accident, in which the patient

made very great muscular efforts to free himself under the burden of two bales of wool, the pressure of which upon him must have exerted direct pressure on the heart. It is possible that the dilatation and hypertrophy were a consequence of a temporary acute dilatation, due to these efforts. The recesses in the chambers of the greatly dilated heart enabled a.m. clots to form in these situations, thus accounting for the various infarcts. The apex of the left ventricle is a less common site for such thrombi than the two auricular appendices. It is probable that the cerebral softening was due to embolic infarction from one of the thrombi in this situation. It should be noted further that both Lewis and Mackenzie suggest that in certain instances hypertrophy of the heart is not due to increased blood pressure, valvular defect, or other cause necessitating increased propulsive effort, but that it is in itself a morbid condition of heart muscle and does not indicate increased efficiency.

2. TWO CASES OF RUPTURE OF THE HEART, FOLLOWING INFARCTION.

Case I. (Under the care of Dr. de Crespigny, Honorary Physician).

G. H., male, *aet.* 77, was admitted on 28th June, complaining of a cough for 14 days. For a few days before admission he had felt feverish. Two days before admission he had had a shivering attack, with pains in the back and right side of the chest. These pains were made worse by moving about, but not by deep breathing or coughing. His bowels had been constipated, and his appetite poor. He had had what he thought was typhoid fever 25 years ago, and had suffered with "gout" for 30 years. He gave no history of venereal disease. On examination, he was an old man, with a sallow complexion, in no distress. His temperature was 98°F., pulse rate 84, respiration 20, and blood pressure 110/60. There was no increase of cardiac dullness; the sounds were faint, but no bruits were detected. The chest was barrel-shaped, and moved, as a whole, on respiration. The percussion note was hyper-resonant over both lungs anteriorly and posteriorly. The breath sounds were diminished in intensity, and there were scattered rales and rhonchi over both lungs anteriorly and posteriorly. Examination of the abdomen disclosed a rounded mass in the right hypo-chondrium, which moved on respiration. This was thought to be the gall bladder. The left kidney was palpable. The urine contained no abnormal constituents. Two days after admission, about 9.30 a.m., he was seen by the house physician, and appeared quite comfortable. About three minutes later he was seen to throw up both hands, give a gasp, and then stop breathing. When seen two minutes later he was dead.

Autopsy No. 93/27 (*J. B. Cleland*).—The lungs were emphysematous and congested. The pericardial cavity was distended, and contained one pint of blood clot. There was an irregular tear, about ⅛in. long, in the upper part of the posterior wall of the left ventricle. The tricuspid orifice admitted four fingers easily; the mitral orifice two and a half fingers. There was some dilatation of the left auricle, and its endocardium was opaque. There was some opacity of the aortic cusp of the mitral valve. On cutting through the papillary muscles supporting this cusp, there was seen below it, and commencing ⅛in. below the mitral ring, a slightly oblique tear in the heart muscle corresponding to that seen on the outside of the heart. Its edges were ragged and degenerated. There was moderate hypertrophy of the left ventricle. The heart muscle was pale and soft, and on cutting into it

below the rupture there was seen a reddish-yellow infarcted area about 1½in. in diameter, and placed nearer the external than the internal surface. The coronary orifices were patent, but there was much atheroma in the coronary vessels, amounting in cases almost to occlusion. The aorta showed moderate atheroma in its arch, and there were atheromatous plaques in the descending and abdominal aorta. The splenic artery was tortuous and atheromatous. The heart weighed 15ozs. The liver weighed 58ozs., and showed signs of chronic congestion. The gall bladder was greatly distended, with a clear mucinous fluid, containing three or four large facetted gallstones and a number of smaller ones. The cystic duct was occluded by one of these. The kidneys were not reduced in size; they had a somewhat red granular surface, and the cortex was slightly reduced. There were no other lesions of importance.

Case II.—Within three weeks of the previous case a similar death occurred at the Parkside Mental Hospital. A. R., a woman, *aet.* 64, died suddenly. A post mortem held on July 22nd showed 8ozs. (by weight) of blood clot in the pericardium, as well as blood-stained serum. The blood had come from an irregular rupture, about half an inch long, in the middle of the front of the left ventricle, and near the apex was another scratch-like mark. The right coronary artery was somewhat atheromatous and dilated. The orifice of the left coronary was patent, but its anterior branch descending in front of the left ventricle towards the rupture was atheromatous, and for some distance almost occluded. The ascending aorta was almost free from atheroma, which was moderate in the arch and descending aorta. Gallstones were present. The vessels at the base of the brain were atheromatous, and there was a little aneurysmal bulging of the left vertebral just before it joined its fellow. There were no other lesions of moment.

Comment.—A number of cases of spontaneous rupture of the heart have been recently recorded in the *British Medical Journal* (*e.g.*, 1924, II., pp. 373, 465, 669; 1925, I., p. 262; 1927, I., pp. 834, 876, 1096).

C. J. Thomas and S. R. Tattersall (*British Medical Journal*, June 18, 1927, p. 1096) record two cases. One was a woman, aged 53, who died suddenly an hour after rising, in whom there was considerable sclerosis of the coronary arteries. The tear was in the posterior part of the right auricle. The other was a man, aged 62, who had a rupture of the left ventricle posteriorly.

B. L. Dodge, on the same page, describes a case of "Spontaneous Rupture of the Right Ventricle of the Heart." The patient was a woman, aged 57. Death occurred whilst lying in bed after having been prepared for an operation.

J. R. Stott and R. Blair (*British Medical Journal*, May 14, 1927, p. 876) describe a case in a woman of 70 who had previously complained of breathlessness and flatulent dyspepsia. She rose from bed in the morning, fell on the floor, and soon died. There was an opening in the lower part of the right ventricle, the wall of which was atrophic. The coronary vessels were arterio-sclerotic and partly blocked.

H. S. Chate (*British Medical Journal*, July 2, 1927, p. 15) records a case in a man, aged 71, with a rupture an inch long in the anterior wall of the left ventricle. The muscle was pale, flabby, and fibrotic. The stomach was enormously distended, and it was thought possible that in sipping hot liquids that had been given him, he had swallowed the air, and the consequent distension had embarrassed the heart.

PLATE I.—Ulceration of the Legs following Cardiac Oedema treated by Novasurol.

To face page 9.]

3. EXTENSIVE ULCERATION OF THE LEGS, FOLLOWING CARDIAC OEDEMA TREATED BY NOVASUROL.

(*Under the care of Dr. de Crespigny, Honorary Physician*).

In June, 1927, B. V., a married woman, *aet.* 49, developed heart failure, with extreme oedema of the abdomen and legs, together with a decreased urinary excretion. She was given injections of novasurol twice a week, and after about three months, when she had had about 30 injections, the shortness of breath and oedema of the legs had improved greatly, but blisters appeared on both legs. The blisters soon began to discharge, and were very painful, and smelt offensively. She was admitted to hospital on January 2nd, 1928, when there was great oedema of both legs from the knees downwards. Encircling the left leg, just above the ankle, was a wide band of granulation tissue, and also a similar patch, 2½in. in diameter, on the dorsum of the left foot. The right leg was similarly affected, but to a less extent. These granulations were intensely oedematous and weeping, and showed no tendency towards healing. (Plate I.).

4. CASE OF HONE'S ENDEMIC TYPHUS-LIKE DISEASE. DEATH DURING CONVALESCENCE.

(*Under the care of Dr. Hone, Honorary Physician.*)

W. N., a male, *aet.* 53, was admitted on the 18th July with a history that he had been quite well until eight days before admission. He then began to feel out of sorts and had a severe headache. He vomited and had hot and cold shivers and aching in the limbs, but did not have any cough or pain in either the chest or abdomen. His bowels were constipated and he thought he was delirious at times. He called in a doctor, who ordered him to remain in bed, which he did until admission into hospital.

On the day of admission (eight days after his illness commenced) he noticed a rash on his chest and abdomen. He had had no previous illnesses except "influenza" at different times. His wife and three children were quite healthy, and as far as he knew there was no similar illness to his in the neighborhood.

On admission he was a middle aged man lying quietly in bed. His speech was wandering and disconnected, although he would answer questions readily. At times he would make attempts to get out of bed. His temperature was 101°, pulse 108, respirations 28, and blood pressure 120/80. His face was florid, dull, and expressionless, while his conjunctivae were suffused. His teeth were carious and there was marked pyorrhoea. The tongue was covered with a thick white moist fur and the breath was foul. Nothing abnormal was detected in the heart or abdomen, but the percussion note was impaired over the base of both lungs with rales and crepitations over the impaired area. Scattered over the chest, abdomen, back, legs, and arms was a rash, which became less marked towards the extremities, so much so that it was absent from the feet and hands. The rash consisted of macules and papules, some of which resembled a typhoid rash, while others were blotchy in appearance and resembled a "dirty measles rash." The spots did not disappear completely on pressure. His reflexes were sluggish but equal on the two sides. The urine was 1010, acid, and contained no abnormality. The patient was diagnosed as a case of endemic typhus, which was confirmed by a blood examination performed three days later. This examination showed a negative Widal reaction, but a positive Weil-Felix reaction with complete agglutination to 1 : 80, partial to 1 : 160, against

B. proteus X19. The temperature fell by lysis until it was normal, nine days after admission, the rash disappearing about the time the temperature became normal. His mental condition gradually improved, although he still remained somewhat apathetic. A second blood examination performed 10 days after admission verified the previous examination. After being normal for two days the temperature rose again, and examination of the lungs showed evidence of pneumonia, from which he died three days later.

Autopsy No. 117/27 (*J. B. Cleland*).—The lungs showed considerable emphysema of the upper lobes and anterior borders and some congestion of their bases. The heart appeared normal. The oesophagus showed several small linear haemorrhagic streaks at the level of the bifurcation of the trachea. The liver was congested. The kidneys were large and deeply congested, weighing 7¾ozs. and 7ozs. respectively; their capsules stripped leaving a somewhat mottled surface. The spleen was dark-red, enlarged, and rather soft, and weighed 11¾ozs. The abdominal aortic lymph glands were reddish, the mesenteric not enlarged. There was congestion of the cortical veins of the brain. The bone-marrow was normal. No other lesions were detected. Cultures made from the spleen and kidneys showed no growth.

Microscopic examination of the kidneys shows acute congestion, with the cells of the convoluted tubules granular and their nuclei ill-defined, the lumen being filled with a granular reticulum—appearances corresponding with cloudy swelling. Another section of the kidneys shows a small group of plasma cells between the convoluted tubules and in another area there was an accumulation of mixed cells, probably chiefly connective tissue cells and polymorphonuclear cells. In a capillary near the first of these areas there was an undue number of polymorphonuclear and round cells. Sections of the liver show apparently an increased number of polymorphonuclears in the capillaries and two small foci of degenerated polymorphonuclears. The capillaries in the heart muscle were distended. The vessel walls of the lung were thick and the alveolar walls increased in thickness. In the pons there was a small collection of lymphocyte-like cells with a few larger cells in the grey matter. Nothing suggestive of Rickettsia bodies was detected in the sections examined.

Comment.—This case exemplifies that the most important complication of this disease is broncho-pneumonia, which may occur during convalescence or during defervescence. It is the usual cause of death in fatal cases.

5. MALIGNANT ENDOCARDITIS WITH EMBOLIC SOFTENING IN ONE CRUS CEREBRI, SUGGESTING ABSCESS IN THE BRAIN, SECONDARY TO MIDDLE EAR DISEASE.

(Under the care of Drs. de Crespigny, Jay, and Smeaton.)

J. W., a female, *aet.* 13, was admitted on May 14th complaining of having had pain in the left ear for seven days. There had been no discharge from the ear and it did not throb. She had been deaf in the left ear since the pain started. Two days before admission she had had severe frontal headache and vomiting. She had had measles, whooping cough, and mumps as a child. She was a healthy looking girl in no evident pain. Her temperature was 99.4°, pulse 104, and respiration 20. Nothing abnormal was detected on examination except that the left ear drum was red and bulging, with slight tenderness over the tip of the mastoid process, but no redness of the

skin or oedema. Paracentesis auris was performed and blood-stained material with no pus was evacuated. Next day the patient became drowsy, with slight rigidity of the neck, with temperature 103°, pulse 144, and respiration 30. The right eye moved but the left was fixed. The right pupil was contracted and the left dilated. A lumbar puncture was performed and clear fluid under pressure was obtained. The cerebro-spinal fluid contained an increase of lymphocytes, but no tubercle bacilli or other micro-organisms could be detected. There was no increase of globulin. There was no alteration in reflexes except that Kernig's sign was present on the left side. Next day her general condition was unchanged. The left pupil was still dilated and did not react to light or accommodation. Nothing abnormal was detected in the fundi. There was an external strabismus of the left eye. The following day the breathing became stertorous and she had slight head retraction. The left pupil was dilated and reacted very sluggishly to light. She had movement in all directions with both eyes. Kernig's sign was present on both sides and a Babinski on the right. The white blood count was 17,000 per c.mm., with polymorphonuclears predominating. There was no improvement the following day, so with a preoperative diagnosis of left-sided temporo-sphenoidal abscess an exploratory trephine was performed, but no abscess was found. The patient died the following morning.

Autopsy No. 62/27 (*J. B. Cleland*).—A small patch of malignant endocarditis was present on the mitral valve, from which *Streptococcus viridans* (*S. faecalis*) was grown, as well as from a little thick honey-colored exudate (? pus) from the middle ear. There was a small area of softening about 1 cm. in diameter in the left crus on its upper surface over the substantia nigra. There was no abscess in the brain or thrombosis of the sinuses. Puncta cruenta were in the brain substance. The thymus was large. The spleen was a little large and soft.

Comment.—The sequence of events seems to have been infection of the middle ear, malignant endocarditis, and finally detachment of portion of the vegetations and embolic softening in the crus.

6. CEREBRAL ABSCESSES SECONDARY TO OLD EMPYEMA.

(*Under the care of Dr. de Crespigny, Honorary Physician*).

C. R., male, *act.* 31, was admitted on April 9th. He had felt quite well until Christmas, 1926, when he noticed a pain in the left side of his chest. This pain persisted until about 14 days before admission. He had noticed himself getting weaker and losing weight. For about three weeks he had been unable to move his left leg, but there was no pain in the leg. For two days before admission he had continuous pains in the head. He could not read during these two days because he could not focus his eyes. Sometimes he saw double. He sweated profusely at night. He had had a cough with slight sputum for about two weeks. He had vomited once. Venereal disease was denied. He had had no previous illnesses.

On examination he was a pale young man, listless, and breathing rather rapidly. His temperature was 97.4° F., and pulse 72. There was nystagmus on looking to the right, with the slow component to the right. The fundi were normal except for venous congestion. The pitch, intensity, and duration of expiration were greater over the left lung than the right. Occasional crepitations could be heard at the right apex, in the left axilla, and at the level of the fourth right rib. The heart and abdomen were normal. The left leg could not be moved. It felt colder than the right. The left hand grip was

weaker than the right. The knee and ankle jerks were exaggerated on the left side, with an ankle clonus on the left side. Biceps, triceps, and supinator jerks were equal on both sides. No alteration of sensation was detected. The urine contained no abnormal constituents. On the day after admission he was still lethargic and could not use the left arm. The following day the patient had three fits, and during the third one died of respiratory failure. A lumbar puncture showed clear fluid which was not under pressure. The Wassermann and colloidal gold reactions on the cerebro-spinal fluid were negative. The cerebro-spinal fluid showed a slight increase of lymphocytes. Globulin was present. No tubercle bacilli or micro-organisms could be detected

Autopsy No. 48/27 (*J. B. Cleland*).—There was an empyematous pocket the size of a large walnut, and containing yellow pus, in the left pleural cavity in front. The surrounding pleura was much thickened. The other organs, with the exception of the brain, showed no lesions of moment. In the brain there were large abscesses in the frontal, parietal, and occipital lobes. There was a yellow, diffuse patch, 1in. in diameter, with some speckled haemorrhage in its centre, on the under side of the left frontal lobe. In the right parietal region abutting on the longitudinal fissure was an abscess cavity, with greyish pus. Separated from the surface by a thickened wall, and in its deeper aspect sharply defined, destroying the hinder portion of the left lenticular nucleus and adjacent tissue, was an abscess cavity nearly 1in. in diameter, with a ragged wall and thick pus. The surrounding brain tissue was softened and discolored with haemorrhage. This abscess petered out in the front part of the occipital lobe. There was another abscess cavity in the front part of the occipital lobe abutting on the deeper part of the longitudinal fissure, showing a necrotic blood-speckled centre, with yellowish discoloration. In the right hemisphere of the cerebellum was an abscess cavity ¾in. in diameter, with greenish contents and fairly sharply defined wall. Films and cultures showed in the brain abscesses numbers of very small gram positive cocci, sometimes in chains. In the empyema pus there were other organisms as well. Cultures from the brain, on blood agar and broth; from the lung on blood agar, and from the spleen on blood serum, all yielded no growth, but a blood serum culture from the brain gave a fairly abundant growth of microscopic colonies, being a pure culture of very small gram positive cocci. Anaerobic meat medium showed some of these cocci with other organisms. Persistent attempts to grow these organisms on other media, except inspissated serum, all proved unavailing. The organisms were not identified. Cultures inoculated subcutaneously and intraperitoneally into a guinea pig, and also into a mouse, gave rise to no ill effects.

Comment.—The abscesses in the brain seem secondary to the old empyema. The remarkable feature is that they were so many and so large, having evidently been present some appreciable time, and yet acute symptoms had only developed three days before his death.

7. EPILEPTIC FITS, CORTICAL CEREBRAL HAEMORRHAGES, AND A SEMINOMA OF THE RIGHT TESTICLE.

(*Under the care of D. de Cespigny, Honorary Physician.*)

E. J., a laborer, *aet.* 37, was admitted on April 25th, at 12.50 p.m., in a comatose condition. He could be roused to a certain extent, but not sufficiently to give his name. The foreman who brought him into the hospital said that he had had several fits during the day, and that the patient had told him that he had been taking fits for 16 or

17 years. He was in the hospital 12 months before, suffering from epileptic fits, but was transferred to the Mental Hospital because of his dirty habits. He remained in the Mental Hospital for three months, and returned to laboring work. He had not had any fits for nine months previous to admission. When in hospital previously the patient was known to have an undescended left testicle, but nothing abnormal was detected in the right. On admission his temperature was 100°F., pulse 72, and respiration 24. His color was quite good. The blood pressure was 140/80. A lumbar puncture was performed, and 25 c.c. of clear fluid, under greatly increased pressure, were obtained. The Wassermann and colloidal gold reactions on this fluid were negative, and there was no increase of globulin or lymphocytes. A specimen of urine could not be obtained, as the patient voided all urine under him. The patient had several fits during the day, and died at 11.50 p.m. without having recovered consciousness.

Autopsy No. 51/27 (*J. B. Cleland*).—The right testicle was much enlarged, and in the scrotum; the left small and just within the internal abdominal ring. The enlarged testicle measured 2¼in. x 2in., and showed on section several pale yellowish-white, neoplastic-looking nodules united together. The left was small, but otherwise normal. There was a somewhat enlarged whitish lymph gland in the neighborhood of the upper part of the right spermatic vein, just before it reached the vena cava. There was a haemorrhage in the brain in the lower part of the right marginal gyrus, and situated 4.5 cm. from the longitudinal fissure. It measured superficially 1.5 cm., in depth 1.25 cm. There was another haemorrhage oppsite the splenium on the left side. Microscopic sections of the testicle show a carcinoma of the so-called "seminoma" type, composed of the usual large rounded cells in masses, with groups of lymphocyte-like cells between. Sections of the brain lesion showed no tumor cells, but old blood pigment and recent haemorrhage and large vascular channels

8. INGRAVESCENT HAEMORRHAGE INTO THE LATERAL VENTRICLES IN A YOUUNG MAN.

(*Under the care of Dr. de Crespigny, Honorary Physician*).

G. C., a male, *aet.* 24, was admitted on July 30th. The history obtained from the medical man who sent him into hospital was that two weeks before admission the patient had had an attack of headache, vomiting, and diarrhoea, which lasted for two days. After the attack he felt quite well, and went back to his work as an engineer. Eleven days later he woke up suddenly in the middle of the night with a severe headache, followed by vomiting, diarrhoea, and unconsciousness. He remained unconscious for about four hours, during which time his pulse rate varied between 30 and 40, and was irregular in rhythm. On regaining consciousness he complained of severe frontal and occipital headaches, and had attacks of vomiting, and the right side of his face and right arm twitched. From this time until he was admitted to hospital, three days later, he was kept under the influence of morphia. After the initial attack of diarrhoea his bowels became constipated, and thereafter required enemata to move them. Previous to this illness he had always been healthy, except that he had suffered from occasional headaches. He had never had earache, or a discharging ear. He had been a regular soldier in the Highland Light Infantry, and had emigrated to Australia two years ago. He was married, his wife being quite healthy, but there were no children. He was a pale, thin young man, lying on his back in bed complaining

of severe headaches across his forehead. He was quite rational, and answered questions promptly. His temperature was 97.2°F., pulse rate 54, and respirations 16. His blood pressure was 130/80. His pupils were equal, and re-acted to light and accommodation, and there was no strabismus. Examination of the fundi disclosed intense optic neuritis, more advanced on the left side, with haemorrhages in both retinae. The teeth were in good condition, and the tongue, which was dry, with a white fur on the dorsum, was protruded in the midline without tremor. There was no evidence of facial paralysis, but there was slight stiffness of the muscles at the back of the neck. Nothing abnormal was detected in the heart, lungs, or abdomen. There was no loss of power or inco-ordination in the arms or legs. The biceps, triceps, and supinator jerks were sluggish, but equal on the two sides. The knee and ankle jerks were rather active, and equal on both sides but the plantar reflex was doubtful. Kernig's sign was present on both sides. No alteration in sensation could be detected. His urine was acid in re-action, and showed no abnormality with the sp. gr. 1026. A white blood cell count soon after admission was 13,000 per c.mm. A lumbar puncture was performed, and 15 c.c. of clear brownish fluid, which was not under pressure, was obtained. Two days later another lumbar puncture was done, and 20 c.c. of a similar brownish-colored fluid withdrawn. This fluid contained many blood cells, blood pigment, endothelial cells, and an increase of polymorphonuclear cells. No tubercle bacilli or other micro-organisms could be detected in films or on culture media inoculated. The following day his temperature rose to 100.4°F., and his pulse rate increased to 104. His general condition remained unaltered, the severe headache being his only complaint. He was given morphia gr. 1/6, and atropine gr. 1/150, as it was found that this was all that would relieve his headache. Fluid obtained by lumbar puncture six days later showed many blood cells, and some polymorphonuclear cells, but less in number than in the previous specimen. Again, no micro-organisms could be detected. After the initial rise of temperature, he continued to show an evening rise to between 100° and 101.4°, whereas it was usually normal in the morning. The pulse rate varied between 96 and 116, and respirations between 20 and 24. At times he became irrational, but there was no change in physical signs. At another lumbar puncture performed six days later 30 c.c. of brownish cerebro-spinal fluid, under increased pressure, were obtained. This fluid contained blood pigment and many blood cells, but no apparent increase of white cells. No micro-organisms were detected. Two days later, at 4.30 a.m., the patient had a spasm, lasting ten minutes, in which his neck, back, and legs became rigid. His eyes remained wide open and turned upwards. At 6 a.m. he had another spasm, lasting ten minutes, preceded by a "meningeal cry." After this spasm he remained unconscious, breathing shallowly at the rate of 12 per minute. His pupils were fully dilated and inactive. No evidence of any paresis was noticed. Lumbar puncture was again performed, and 12 c.c. of blood-stained cerebro-spinal fluid under slightly increased pressure were obtained. This fluid contained very numerous blood cells, but no apparent increase of white cells. Death occurred at 11.50 a.m., due to respiratory failure.

Autopsy No. 124/27 (*J. G. Sleeman*).—The cerebral vessels appeared normal. The right hemisphere was slightly larger than the left. The cisterns at the base of the brain contained comparatively fresh blood. The ventricles were full of blood, that in the right lateral ventricle being more abundant and apparently older. In this ventricle the haemorrhage had burrowed more extensively into the

surrounding brain substance, especially in the descending horn, whilst in front there was excavation to within ½in. of the anterior pole of the frontal lobe. In all the ventricles there was some softening of the brain substance about the clot, and in addition, in the floor of the right ventricle there was greenish-yellow staining of the brain substance, being most yellow at about the origin of the optic chiasma.

Comment.—This case is highly unusual in this respect, that there is no evidence of infection, toxaemia, or vascular disease, which would account for the ventricular haemorrhages.

9. GLIOMA OF THE OCCIPITAL LOBE.

(*Under the care of Dr. Guy Lendon, Honorary Assistant Physician.*)

F. S., a male, *aet.* 48, was admitted on February 12th complaining that for two months he had been feeling tired and had had a severe headache. He had felt so tired that he had been in bed for practically the whole of the two months before admission. Previous to this he had been quite healthy except for "kidney trouble" in 1918. On admission he had no backache, but was very languid, so much so that when asked a question he would yawn, make no reply, and then forget what the question was. He denied having had venereal disease. His temperature was 96.6° F., pulse 78, respiration 24, and blood pressure 146/110. Nothing abnormal was detected in the heart, lungs, or abdomen. The superficial and deep reflexes were equal on the two sides. Babinski's sign was not present, but Kernig's sign was elicited on the left side. The left arm would remain fixed in any position in which it was placed; the right arm also showed this characteristic, but not to such an extent as the left. There was incoordination of movement, best seen when the patient attempted to touch the tip of his nose with his finger. This feature was more evident on the left side. There was no paralysis of any of the ocular nerves, but examination of the fundi showed optic neuritis on both sides, more advanced on the left. A lumbar puncture was performed and about 25 c.c. of clear cerebro-spinal fluid under pressure were obtained. The Wassermann and colloidal gold reactions on this fluid were negative. On the evening of admission the patient had projectile vomiting. The next day he was still very drowsy, but could be roused easily, although difficult to interrogate. At times he would become restless and moan, and complain of severe pains all over his head. Two days ater admission he became quite unconscious, with stertorous breathing and irregular pulse. Both pupils were fixed, but the left was dilated more than the right. The limbs were flaccid and toneless, no difference being noted on the two sides. The reflexes could not be elicited. Two hours later the patient died.

Autopsy No. 18/27 (*R. L. T. Grant*).—With the exception of the brain, the other organs showed no lesions of importance. There were some pleural adhesions and slight hypertrophy of the bladder. The brain showed at the posterior extremity of the left cerebral hemisphere a gelatinous semi-liquid neoplasm. This involved the superior portion of the occipital lobe and extended forwards to the posterior boundary of the parietal lobe. The tumor substance was yellowish in color, and in parts of it were seen evidences of haemorrhage. The boundary between the tumor and the surrounding brain substance was not sharply demarcated. The left lateral ventricle was thrust over to the midline by the tumor. There was evidence of a swollen cerebellar cone.

Microscopic sections of the tumor showed a good deal of necrosis, with small areas composed of small cells and accompanied by large well-formed vessels with thick walls. In other places there were numerous cells, rather small, with processes forming a matrix; still other portions showed rosette-like areas with nuclei at the periphery and a central part without cells, perhaps composed of fibrils of glia.

10. CASE OF TUBERCULOMA OF THE CEREBELLUM.

(Under the care of Dr. Hone, Honorary Physician.)

G. M., a married woman, *aet.* 32, was admitted on August 3rd. She said she had been quite well until two months before admission, when she began to get frequent frontal and occipital headaches. She also got "turns" in which she became giddy and fell to the ground. She did not think she fell in any particular direction, but during an attack objects appeared to revolve around her from right to left. Occasionally she lost consciousness, but did not bite her tongue or injure herself in any way. She would have about four attacks a day, and each attack would last only a few minutes. She vomited on two or three occasions and noticed that the sight in her right eye was failing. Her general health remained good, having a good appetite and not losing any weight. She had not had any previous illnesses. One child had died at the age of 12 years and the other at seven months, but she did not know the cause of death in either case. She had had one miscarriage since the birth of her last child. She was a healthy-looking woman, lying quietly in bed, mentally dull. Her temperature was 97.4°, pulse 100, respiration 20, and blood pressure 140/100. Both pupils were dilated, the right more so than the left, but they reacted sluggishly to light and accommodation. There was no nystagmus and the movements were good in all directions. Examination of the fundi revealed papilloedema in both eyes. No other abnormality could be detected on physical examination. A lumbar puncture was performed and the cerebro-spinal fluid was under increased pressure. An examination of this fluid showed a few blood cells, a faint trace of globulin, no increase of lymphocytes, and no micro-organisms. The colloidal gold curve was normal and the Wassermann reaction negative. Her condition remained unchanged for about seven days, when she developed slight paresis of the right external rectus, and later paresis of the right levator palpebrarum. There was an increase in the deep reflexes in the left leg, which had become more wasted. There was inco-ordination of the right arm and to a lesser extent in the left arm. The papilloedema gradually increased, until finally the sight in the right eye disappeared. One month after admission she became deaf in the right ear. With a diagnosis of a right-sided cerebellar tumor a decompression operation was decided on, but the patient died suddenly while being prepared for operation.

Autopsy No. 137/27 (*H. G. Anderson, partial examination only*). —There was slight external hydrocephalus with haemorrhage into the inferior pole of the right lobe of the cerebellum, with "cone moulding" into the foramen magnum, secondary to a tuberculoma of the cerebellum, which appeared as a hard irregular caseous tumor in the substance of the right lobe. There was no external involvement of any of the cranial nerves or pituitary fossa. The tumor was not connected with the meninges. Microscopically, a few giant cells were seen and an occasional tubercle with epithelioid cells was noticed round the edge of a caseous mass.

11. A CASE OF TETANY.

(*Under the care of Dr. de Crespigny, Honorary Physician.*)

(Compiled by the Medical Registrar, DR. J. W. ROLLISON.)

M. M., a girl, *aet.* 18, was admitted on July 19th, 1925, suffering from pains in the abdomen and vomiting. X-ray examination suggested a pyloric ulcer, and this was subsequently confirmed at operation, when a posterior gastro-enterostomy was performed. Whilst awaiting operation she complained of stiffness in the fingers, but this condition soon disappeared. She made an uninterrupted recovery after the operation and left hospital on August 30th, 1925.

After leaving hospital she was quite well for several months until she began to get pains in both hips and in the spine. The pain, which was dull and aching in character, started from the back of the neck and extended down to the bottom of the spine. It was worse in the right hip, especially on movement.

Fifteen months before her right ankle had "turned over," and so it had been put in plaster for a month. The plaster had then been removed, and while under an anaesthetic the plaster was reapplied. When the plaster was removed three months later the ankle was still "turned over." On the day the plaster was removed she became stiff all over, with her head extended and her jaws clenched. Her arms were bent across her chest, the knees were bent, and both ankles had turned over. She was then put on splints for six months, during which time she had several spasms, in which she broke her splints. At that time she was treated with parathyroid and calcium lactate tablets, and thinks she improved. The tablets were discontinued after eight months. During a spasm she would have severe pains in her abdomen, would vomit blood, and her nose would bleed. Occasionally she could not breathe and artificial respiration had to be performed. The splints, with the exception of those on her hands and feet, were removed for three months, but were reapplied in February, 1927, for fifteen weeks. She was found to be suffering from tape worms, and was treated accordingly. She was readmitted to this hospital on July 22nd, 1927, when she still complained of pain in her right hip, in the lower part of her spine, and in both ankles. On admission her temperature was 98° F., pulse 84, and respirations 20. She was a thin, pale girl, lying on her back in no distress. Nothing abnormal was detected on an examination of her eyes, teeth, tongue, heart, or lungs. There was a scar of the previous operation on the abdomen, together with tenderness over the whole of the right side of the abdomen. There was no rigidity and no organs or masses were palpable. The only abnormality noted in the back was tenderness over the spinous processes of D4, D5, L.2, and L.3. The forearms were flexed to a right angle and lay across the chest. The wrist and proximal interphalangeal joints were fully flexed in a state of constant spasm, which could be fully overcome by gentle counter-pressure, but the distal interphalangeal joints were extended. The muscles of the legs were somewhat wasted, but, as in the arms, they were still capable of fair movement. Talipes equino-varus was present on both sides, but more advanced on the left. The reflexes were sluggish, but equal on the two sides, and there was no evidence of any paralysis or alteration of co-ordination. The only sensory change noted was a patch of anaesthesia to light touch on the inner sides of both knees. The urine was 1020, acid in reaction, and contained no abnormal constituents. She was given parathyroid, 1/100gr., and a mixture containing calcium carbonate, 10 grs., three

times a day. Four days after admission she began to get spasms, in which she vomited almost continuously. The spasms occurred at intervals of 10 to 20 minutes over a period of about three hours. During the spasms she would cry out with pain in her legs, the pain being severe enough to need morphia to relieve it. As soon as the spasms began the knees were flexed, while the right leg became twisted around the left, as shown in the photograph. (Plate II.). She could not straighten her legs herself, but if this were done for her the pain would be relieved. Also during a spasm her back would become rigid, and it would be necessary for a nurse to raise her shoulders from the bed in order that she might breathe properly. At the same time as her legs became twisted her arms would be doubled behind her back. Ever since the first spasms the right leg had remained twisted around the left, and if untwisted returned into its former position during the next spasm. For four days after admission she continued to have spasms at intervals of about two days, but the spasms gradually diminished in severity and the intervals between them were lengthened. The calcium content of the blood was 7.8 mg. per 100 c.c. of serum seven days after admission, but 17 days later, after having calcium chloride, 40grs., and ammonium chloride, ½ drachm, four-hourly for four days, as well as two intravenous injections of 5 c.c. of 10 per cent. solution of calcium chloride, it had risen to 13.05 mg. per 100 c.c. The phosphorus content of the blood was 0.7 mg. per 100 c.c., the fasting blood-sugar 0.09 per cent., and the blood urea nitrogen 7.5 mg. Then she was given parathyroid tablets, ¼gr., together with a mixture containing calcium chloride, 30grs., three times a day. Her general health remained stationary, and she had no further spasms. Massage, electrical stimulation, and active movement were then commenced. Progress was very slow at first, but she gradually improved, until finally, seven weeks later, she began to walk with assistance. Three weeks later she could walk unaided, and was finally discharged from hospital on March 5th, 1928.

12. FATAL CASE OF TIGER-SNAKE (*NOTECHIS SCUTATUS*) BITE.

(*Under the care of Dr. de Crespigny, Honorary Physician.*)

(Compiled by the Medical Registrar, Dr. J. W. Rollison.)

C. F., a male, *aet.* 41 was bitten on the left forearm by a tiger snake (*Notechis scutatus*) at 3 p.m. He did not incise the wound, but sucked it and put ligatures on his arm for about half an hour. The delay in seeking treatment was due to the patient believing himself to be immune. He had been in the habit of handling snakes, and had said that he had often been bitten without ill-effect. Within 10 minutes of the bite he had a headache and pain in the left axilla. He also felt nauseated, but did not vomit until three-quarters of an hour later. The headache and pain in the axilla gradually became worse, but he kept on demonstrating at the Snake Park for two hours, when he went home and lay down. About 7 p.m. a friend called to see him, and the patient said he felt all right, although he was still vomiting. At 8 p.m. he vomited dark material for the first time. The symptoms gradually became more severe, and he was brought into hospital about midnight. When admitted he could sit up by himself, but was unable to stand or walk without assistance. His speech was like that of a drunken man. He complained of a continuous desire to misturate and defaecate. His temperature was

PLATE II.—Tetany—Attitude of the patient with right leg twisted round the left.

To face page 18.]

96° F., pulse 76, and respirations 16. The blood pressure was 140/70. The pupils were dilated and reacted slightly to light. There was also diplopia and a partial bilateral ptosis. He could not move either eye in any direction, but there was no strabismus. There was a small punctured wound on the flexor aspect of the left forearm midway between the elbow and the wrist. Surrounding the wound was an area of ecchymosis about 1in. in diameter. The whole forearm was swollen and pitted on pressure. No other abnormality was detected on general examination except that the urine was very dark and contained blood cells and haemoglobin but no casts. The wound was excised and potassium permanganate crystals rubbed into it. He was also given stimulants. After admission the patient kept vomiting dark brownish material at intervals and became more drowsy and irritable. At 2.30 a.m. his temperature was 96°, pulse 88, respirations 16, and blood pressure 137/70. He was slightly cyanosed and still had difficulty in articulation and swallowing. His respirations were short and shallow and abdomino-thoracic in type. Twenty c.cm. antiserum (specific only against African snakes, such as the cobra and puff adder) were injected intravenously. At 4 a.m. the wound had oozed freely through the dressings. Two oozing points were ligatured and the wound packed with tampons and a pressure bandage applied. The patient seemed drowsier, but could still answer questions with difficulty. The respiratory rate was still 16, although the respirations were more shallow and jerky. At 6 a.m. he was given continuous oxygen intranasally, as he was becoming more cyanosed. At 8.30 a.m. he did not answer questions. He was very cyanosed and had much difficulty in breathing, although there was no retraction of the lower intercostal spaces. The temperature was then 95.2°, pulse 140, respirations 24, and blood pressure 120/70. At 9.30 a.m. a Henritt's airway was put in, and he was given a continuous supply of 90 per cent. oxygen and 10 per cent. carbon dioxide instead of the pure oxygen. His pulse was very weak, so he was given 1 c.cm. pituitrin. Artificial respirations were also begun and continued until 11.45 a.m., when the patient died.

Autopsy No. 66/27 (*J. B. Cleland*).—The body was that of a well-developed and well-nourished man, 5ft. 10in. in height. A circular wound 1½in. in diameter, extending down to the muscle and exposing a vein, was present in the middle of the left forearm on the dorso-radial aspect. The forearm was somewhat swollen and discolored, with a slight bruised appearance below the wound. On incision there was infiltration, with dark viscid blood for 4in. laterally and 5in. vertically in this area. The extravasation was possibly traumatic. The axillary glands were not enlarged. The blood escaping from the great veins in the neck was unduly thick. The lungs showed a tendency to emphysema and some congestion posteriorly, with thick viscid blood. There was a little staining of the endocardium, and the lining of the aorta showed a slight coffee-stain tint. The bile was dark-green and viscid. The spleen was of normal texture, but dark color, and viscid blood could be squeezed out. The kidneys weighed 7½ozs. and 5¼ozs., and were congested; the cortex was swollen and somewhat pale, and a little thick blood oozed from them. The pancreas, stomach, and intestines and other organs showed no lesions. There was a moderate excess of clear cerebro-spinal fluid, and the meshes of the pia-arachnoid were full of a clear fluid, which dripped away. There was no excess of fluid in the ventricles. The brain was rather wet. Some of the thick blood obtained at the autopsy was centrifuged, when some lysis of the red cells was recognisable (the

body had been kept overnight, however). The blood seemed incapable of clotting. A film made of it showed the red and white cells apparently intact. Fluid was expressed from the wound and injected straight away into a guinea pig, which received 1 c.cm. and died 24 hours later. There was slight haemorrhagic exudation at the site of inoculation, and slight haemorrhages into the peritoneal cavity, but no other obvious lesions. Other guinea pigs were inoculated as follows, with negative results:—1 c.cm. of an emulsion of the medulla; 2 c.cm. of unclotted blood; 2 c.cm. of urine. Microscopical examination of the patient's kidneys showed intense engorgement of the vessels and capillaries of the glomeruli. No casts were recognisable. No lesions could be detected in the liver or heart muscle, or in the pons, optic chiasma, or external capsule. The thyroid showed some increase of fibrous tissue and decrease of colloid material, many vesicles being empty. The splenic sinuses were filled with blood.

Comment.—This case indicates the chief actions of colubrine venom, *e.g.*:—(1) Neurotoxic; (2) prevention of clotting; (3) endotheliotoxic, causing leakage of blood from the small vessels; (4) haemolysis (haemoglobinuria).

13. TUBERCULOSIS OF THE SUPRARENAL GLANDS, POTT'S DISEASE, AND TUBERCULOSIS OF THE LUNGS.

(*Under the care of Dr. Cowan, Honorary Physician*).

J. C., a male, *aet.* 39, was admitted on November 22nd, 1926, complaining of feeling off-color for 12 months. For three months he had had a constant pain in the back, radiating to the abdomen under the costal margin. The pain was worse on exertion, especally by jarring or jolting in a motor car. He had had a cough for two months, with occasional slight haemoptyses. He had vomited several times, and on occasions the vomitus had contained blood. He had lost a good deal of weight, and had night sweats. He had had an injury to the back nine years ago. Five years ago he had noticed a lump on his back. On examination, there were signs of advanced pulmonary fibrosis in both lungs. There was a marked angular deformity of the spine in the mid-dorsal region about the sixth to eighth vertebrae. There was no alteration in his reflexes. The urine contained no abnormal constituents. An X-ray showed a (?) tuberculous condition at the right apex and consolidation at the right base. There was considerable bony destruction of the lower dorsal vertebrae. The Wassermann re-action was negative, the von Pirquet positive. Twelve specimens of sputum were examined, but no tubercle bacilli could be detected. After being in hospital for three months he developed a thrombosis of the left brachial vein, which gradually subsided. During his stay in hospital the patient's general condition did not change, the lung signs not altering, and the temperature being of a hectic type. He died on March 15th.

Autopsy No. 31/27 (*J. B. Cleland*).—There was a dusky appearance of the face. The trunk was slightly discolored, the body greatly emaciated, and the skin rather shiny. There was an angular curvature of the dorsal spine. In the upper part of the left lung there was a good deal of fibrosis, with some small caseous areas. The upper half of the right lung was encased in a thick, almost cartilaginous, pleura. The upper part of the upper lobe was dense, fibrotic, and pigmented with some small caseous areas, but no cavity. The rest of the lung was tough and congested. There was a small pocket in the oesophagus, opposite the bifurcation of the trachea, due probably to a tuberculous

gland which had ulcerated into it. The left suprarenal gland was converted into a somewhat enlarged and knobby fibro-caseous mass. The right suprarenal was not so enlarged, and showed firm, cheesy tuberculous patches, with only a small patch of suprarenal tissue left. There was a caseous area in the left vas deferens. There was some inspissating pus on the upper side of the diaphragm. Near the angles of the right ribs the vertebrae opposite the diaphragm showed extensive tuberculous caries. The caries extended upwards on the left side of the bodies to the level of the clavicle. The right epididymis was densely fibrosed, with a caseous focus at its upper pole.

14. FATAL DIPHTHERIA IN AN OLD WOMAN.

(*Under the care of Dr. F. H. Beare, Honorary Assistant Physician*).

C. P., female, *aet.* 69, was admitted to the Infectious Diseases Block suffering with a sore throat of four days' duration. She had been quite well until four days before admission, when she developed a sore throat, but had no cough or discharge from the nose. She shivered a little, but did not feel feverish, and went about her work the next day. Two days after the onset of her symptoms she felt worse, with a very sore throat, difficulty in swallowing, and wheezing respirations. On the day of admission her throat was still very sore, and she vomited for the first time. On admission her temperature was 98.6°F., pulse 124, and respirations 26. The respirations were wheezing in character, but the wheeze was more pronounced with inspiration. Her color was good, and there was no retraction of the chest. Both tonsils and the pharyngeal wall were congested and covered with a greyish-white membrane, which did not extend to the uvula. There was much greenish muco-pus in the nasopharynx, but no membrane was seen in the nares. The whole neck was very tender to palpation, but no definite enlarged glands could be felt. Examination of the lungs revealed only a few scattered rales, which did not disappear on coughing. Nothing abnormal was detected in the heart or abdomen. The urine was of specific gravity 1028, acid in reaction, and contained no abnormal constituents. She was put in a steam tent, and given large doses of anti-diphtheritic serum (54,000 units intramuscularly), and frequent throat douches. Next day she was much worse. Her temperature was 103.4° F., pulse 144, and respirations 40. She became very breathless, but the stridor was not increased, and her color remained good. Examination of the lungs was not satisfactory, as the breath sounds were obscured by the stridor. She died early the following morning.

Autopsy No. 91/27 (*J. B. Cleland and O. W. Frewin*).—The tonsils, soft palate, and epiglottis were congested, but free from membrane. A membrane was present in the larynx and trachea, which was white, and stripped easily, leaving a red, raw surface. This membrane extended into the secondary divisions of the bronchi. There were beads of pus in the bronchioles. The lungs were congested, but there were no obvious signs of broncho-pneumonia. The heart showed slight atheroma of the coronary arteries, but was otherwise normal. In the aorta there was very slight atheroma. There was congestion of the internal organs, most marked in those which were very vascular. Diphtheria bacilli were cultivated from the membrane.

Comment.—Diphtheria in elderly persons is unusual, and death rare. In this case a woman of 69 died, probably chiefly from toxaemia, with some respiratory embarassment, after extension of the diphtheritic membrane to the trachea and bronchi.

15. A CASE OF RENAL RICKETS.—DOUBLE HYDRONEPHROSIS WITH DEATH FROM URAEMIA.

(Under the care of Dr. Cowan, Honorary Physician.)

F. E., a male, *aet.* 18, was admitted on July 20th complaining of weakness in his legs for the last eighteen months. Before this he had felt quite well, but he then noticed that first his ankles and next his knees began to feel weak. He was then admitted to the Ballarat Hospital. Eight months prior to admission to the Adelaide Hospital he had been put on Thomas's walking calipers and had used them for six months, when he began to have difficulty in getting about. For the last two months he had had to use crutches. He did not think his legs had become any thinner but they had bent and he was knock-kneed. He could use his legs quite well, but they were too weak to support his weight. His appetite was quite good, the bowels regular, and he experienced no frequency or difficulty in micturition. He thought he had been gaining weight. For several years he said he had noticed a lump which would appear in the left side of his abdomen. This lump would remain for a few days and then disappear without causing any discomfort whatsoever. The lump, which was present on admission, had been present for about two weeks. He was born on a farm at Colac (Victoria), and had spent practically the whole of his life on a farm. His parents stated that he was quite a normal healthy child, whose only illness was diphtheria when four years old. He had four brothers and five sisters, who were all perfectly healthy except that one sister had had several operations for "rotten bone" in her leg.

On admission his temperature was 96.8° F., pulse 88, and respirations 20. He was a rather thin, pale boy, who did not look his age. The tongue was moist and clean, showing no tremor or other abnormality. The development of the dental arches was normal and the teeth regularly placed. There was an absence of carious teeth. There was a peculiar "mottled" effect of the enamel in the incisal region of the anterior teeth and cusps of the posterior teeth which was thought to be due to an upset in the enamel formation at about the age of two years. Apparently calcification of the teeth had proceeded normally afterwards. The chest was rather barrel-shaped, with beading of the ribs, giving a well-marked rickety rosary. Nothing abnormal was detected in the lungs. The apex beat was in the sixth intercostal space 5in. from the midsternal line, and the upper limit of the heart reached to the third rib, but there was no enlargement to the right of the sternum. The heart sounds were loud, especially the second, which was accentuated. No bruits could be detected. The blood pressure was 120/60. The abdomen was large and protuberant, but moved evenly on respiration. There was a smooth, rounded mass palpable in the left iliac fossa. It was slightly tender and did not move on respiration. There was tenderness also in the right iliac fossa over the course of the ureter, but no mass was felt. There was no enlargement of either the liver or spleen. The patient could not stand without support. The legs and thighs were thin, but there were good muscle, bone, and movement. The thighs were parallel, while there was enlargement of the internal condyles of both femora. The legs were separated at an angle of about 30°. The ankles were correspondingly rotated inwards so as to bring the feet flat on the ground. There was also a backward dislocation of the foot on the os calcis. There was no swelling of the joint, nor was there any limitation of movement in any direction.

Apart from being thin, the arms showed no abnormality. There was no enlargement of any of the arm bones. The reflexes were all rather active, but equal on the two sides. Sensation was unimpaired. No abnormality was detected in the spine. The urine was of sp. gr. 1009, acid in reaction, and contained much albumen. Four days after admission the mass in the abdomen was not palpable nor was there any tenderness over its site. The urine still contained much albumen, and a MacLean's test showed a low urea percentage. Microscopically the urine contained a few blood and polymorphonuclear cells, but no casts or micro-organisms could be detected. There was no growth on the culture media inoculated. The phosphorus content of the blood was 2.3 milligrams per 100 c.c. and the calcium content 10.9 milligrams. The blood urea nitrogen was 45 milligrams per 100 c.c. of blood. The Wassermann reaction of the blood was negative. The white blood count was 12,000 per c.mm., and the haemoglobin 60 per cent., but apart from this no abnormality was detected in the blood. An X-ray examination of the pelvis showed irregularity in density in the bone in the region of the necks of both femora and widening of the epiphyseal lines, but the head of the bone was comparatively unaffected. The appearances resembled bilateral Perthes' disease or rickets. Similar changes were noted in the epiphyseal regions of both knee and ankle joints. He was given a diet containing an abundance of milk and cream, but no meat and a minimum of salt. He was also given cod liver oil and fruit juices. For about 12 days his condition remained stationary, but then he complained of abdominal pains and his gums began to bleed. Examination of the abdomen revealed nothing abnormal. He then became breathless and rather restless, the pulse became weaker, and he was somewhat cyanosed. The temperature remained subnormal. His condition remained unalterd for another two days, when he began to vomit. The vomitus resembled coffee grounds in appearance and contained clots of blood. Next day he became unconscious, had two uraemic fits, and died.

Autopsy No. 119/27 (*J. B. Cleland*).—The body was that of a boy 5ft. 5in. high with a slight rickety rosary, knock knees, and prominent lower ends of the tibiae and fibulae. There was no hair on the face or in the axillae. The teeth were sound and clean, but there were opaque white areas on the tips of the central teeth. The bladder was distended to 1½in. above the umbilicus, occupying more than a third of the abdominal cavity. The heart was not obviously hypertrophied and weighed 11ozs., though the left ventricle seemed a little thickened. The right lung showed a few red firm areas of broncho-pneumonia. The thymus remained as a thin sheet. The suprarenals were of moderate size and applied to the upper poles of the very hydronephrotic kidneys. The hydronephrosis was very extensive, that on the left reaching the diaphragm. Both ureters were greatly dilated, the left being 1in. in diameter and the right three-quarters of an inch, and their course was somewnat sigmoid. A catheter could be passed along the urethra without any obstruction, and the bladder contained about three pints of pale yellow urine. The inner wall of the bladder was very white, and there was not much hypertrophy of its coat. The lower ends of the right tibia and fibula, which were removed, showed epiphyseal enlargement. The vessels in the brain were healthy but there were numerous punctate haemorrhagic specks in the brain substance, especially of the pons. Death was attributed to uraemia.

Comment.—This case is of great interest and importance owing to the association together of extensive destruction of kidney substance as a result of hydronephrosis and the presence of lesions in the bones such as are characteristic of rickets. The association of renal fibrosis with rickets-like lesions is well known though rare, and is usually accompanied with dwarfism, known as renal dwarfism. In such cases it may be thought that both the renal condition and the bone lesions were directly due to some common cause, *e.g.*, some vitaminic deficiency. It certainly has not been established that the bony changes are clearly the consequence of the renal lesions. In the present case we can say practically with certainty that the bony lesions were in some way the direct result of the damage to the kidney. We do this for the following reasons:—

(i.) Ordinary rickets is almost unknown in Australia, though rather vague forms have been recorded in the slums of Sydney. A case in a country district, especially on a farm, is unknown and very unlikely to occur. The rickets-like lesions here cannot be attributed to the most ordinary cause—direct vitaminic deficiency.

(ii.) The dilatation of the ureters and the bladder shows clearly that there was some kind of obstruction to the escape of the urine from the bladder, and that the double hydronephrosis with destruction of kidney tissue was purely secondary. No organic obstruction was met with in the urethra. One can only suppose there was some functional condition, perhaps an achalasia of the urethral sphincter, responsible for the bladder distension. No vitaminic deficiency could have caused the double hydronephrosis. Nevertheless this secondary destruction of renal substance was associated with rickets-like lesions, and the inference that one must draw is that the kidney damage was in some way responsible for the latter. It is possible that such damage to the kidney might in some way interfere with the absorption of vitamines or their delivery to the bone-forming tissues, or it may be that some internal secretion of the kidneys plays a necessary part in proper bone formation.

16. TWO CASES OF ACHLORHYDRIA; ONE FATAL FROM ASTHENIA AFTER VARIOUS OPERATIONS.

(Under the care of Dr. F. S. Hone, Honorary Physician).

Case I.

E. B., a married woman, *aet.* 47, was admitted on 24th November, complaining of attacks of diarrhoea for the past six years. The attacks would come on every two or three weeks, and she would then have a motion about every half hour. The motion was fluid, and had no special characteristics. In between the attacks her motions were normal. She also complained of pains in the upper part of the abdomen, coming on soon after food, and lasting a variable time. The pain was made much worse by taking more food, and caused her to vomit occasionally. She had been operated on for a floating right kidney 20 years ago, for gastric ulcers six years ago, and for adhesions six months ago. There was no information as to what was actually found at these operations.

She was a pale, wasted woman, of low mentality, who answered questions in monosyllables. Her temperature was 98°, pulse 130, of poor volume and tension, and respiration 22. Nothing abnormal could be detected in her heart or lungs, but there was generalised abdominal tenderness most marked in both iliac fossae. There was no rigidity. The right kidney was easily palpable. All the reflexes were easily

elicited and equal on both sides. No abnormality could be detected by rectal examination. The urine was 1020, acid in reaction, and contained albumen. A test meal was performed, and revealed an absence of free hydrochloric acid. Microscopically, the faeces contained no blood or pus cells, and no pathogenic micro-organisms. She was given dram doses of dilute hydrochloric acid with her meals, and although her diarrhoea continued, the motions were less liquid and more formed. Her general condition gradually became worse, however, and she died on 9th December.

Autopsy No. 207/27 (H. G. Anderson).—There was great emaciation and gross dilatation of the stomach, with a patent gastro-enterostomy opening. The lower border of the stomach reached to 2in. below the umbilicus. The mesentery and pyloric portions of the stomach were adherent to an operation scar in the right paramedian situation, above the umbilicus. The surface of the stomach was covered with mucus. There was a little congestion of the intestines. The liver showed cloudy swelling. The pancreas was normal. There were no other lesions of moment.

CASE II.

S. A., a married woman, *aet.* 33, was admitted on 29th November, complaining of attacks of diarrhoea for the past five years. The attacks used to come on every three or four weeks, and would last about four days. The motions, except for being fluid, had no special characteristics. She also had burning pains across the lower part of the abdomen after food, but they were independent of the attacks of diarrhoea. She had been operated on 18 years ago for the removal of her appendix, and again four years ago, when a modified Gillian operation was performed for a retroversion of the uterus. Fifteen months ago she had been in a Mental Hospital for five weeks. On examination, she was a thin, nervous woman, who was obviously mentally deficient. Nothing abnormal could be detected on physical examination except tenderness on deep pressure in the mid-epigastrium and slight prolapse of the uterus, which the gynaecologist did not consider warranted operation. A fractional test meal was carried out, and showed absence of free hydrochloric acid. She was given dram doses of dilute hydrochloric acid with her meals. The diarrhoea ceased, and her general condition gradually improved.

This case exemplifies the importance of excluding achlorhydria as a cause of chronic or recurrent diarrhoea, and the ease with which diarrhoea, due to achlorhydria can be cured by the administration of dilute hydrochloric acid. Such cases are often hereditary. One patient who had suffered for 20 years with this form of diarrhoea told one of the editors that her father and uncle were similarly subject to chronic diarrhoea.

17. CARCINOMA OF THE LUNG.

(Under the care of Dr. de Crespigny, Honorary Prysician).

F. R., a male, *aet.* 51, was admitted on the 21st September, with a history that he last felt quite well about five months before admission. At that time he noticed a pain in the right side of his chest, made worse by deep breathing or coughing. His cough was very troublesome, and he brought up large quantities of sputum. He did not stop working, and his cough gradually disappeared. Two weeks before admission his cough returned, and he began to expectorate large amounts of evil-smelling sputum. The pain in his chest did not become any worse, and his breathing was not distressed. He had lost

a good deal of weight during his illness, but never at any time did he notice any blood in his sputum. He had not had any previous illness, and denied veneral disease.

On admission his temperature was 101°, pulse 120, and respiration 32. He was a thin man, with flushed face, propped up in bed in obvious respiratory distress. His breath on coughing was extremely foul. Nothing abnormal could be detected in his heart, but there were signs of fluid up to the level of the right fourth rib in front and to 2in. above the angle of the scapula behind. The liver dullness was continuous with the fluid dullness, and extended to 2in. below the right costal margin, where the smooth liver edge could be felt. Apart from the enlargement of the liver nothing abnormal could be detected in the abdomen. The reflexes were equal and active and the urine contained no abnormal constituents. The chest was aspirated and turbid chocolate-colored fluid withdrawn. This fluid contained numerous mixed micro-organisms, including streptococci, but no tubercle bacilli or amoebae. An X-ray examination of the chest showed a dense opacity, occupying the lower two-thirds of the right lung, with a sharply defined upper margin which was unchanged by change of position. Under gas and oxygen anaesthesia, a rib was resected, and much very foul-smelling pus evacuated. A drainage tube was inserted. For a few days after the operation the patient progressed satisfactorily, drainage through the tube being maintained and the temperature subsiding. On the eighth day after the operation he suddenly got a severe pain at the site of the wound; his breathing became distressed, and he was cyanosed. He died about six hours later.

Autopsy No. 147/27 (*J. B. Cleland*).—Underlying the empyema cavity on the right side, into which an operation wound had been made, was a white fungating new growth about 1¼in. in diameter, projecting into the superior branch of the right bronchus. Around the growth there was bronchiolectasis, and the fibrous tissue framework was greatly increased. The empyema cavity was ragged, with its wall firm and fibrous. There was a layer of inspissated pus separating the base of the lung from the diaphragm. The whole substance of the right lower lobe was consolidated, and the bronchioles were enlarged and filled with pus. Similar bronchiolectases were present in the left lower lobe. Beyond the liver being large and fatty, there were no other lesions of moment. Sections of the growth showed that it was a squamous-cell epithelioma, with a good deal of fibrosis in the wall of the bronchiole, with chronic inflammatory tissue and small blood vessels surrounding it, and now being invaded by the new growth. There were numerous mitosing cells.

Comment.—It is remarkable that so many pulmonary cancers are squamous epitheliomata; it is difficult to decide in what cells they originate.

18. COLLAPSE OF THE LUNG.

(*Under the care of Dr. W. Ray, Honorary Physician.*)

M. B., a male, *aet.* 16, was admitted on September 2nd complaining of spitting up blood at intervals for five days. He had been feeling quite well until five days before admission, when after jumping over a fence he began to spit up blood. During the first day he coughed up about half-teaspoonful of blood on six different occasions, but after that the bleeding was not so frequent. If he breathed deeply he would get a pain under the left ribs, but he was not short of

breath. Three days later he got pains across his chest after eating, but this soon disappeared. The same day he spat up about half a cupful of blood.

He had five brothers and two sisters, all of whom were healthy, except one brother who had died of pulmonary tuberculosis twelve months previously.

On admission his temperature was 99°, pulse 104, and respirations 22. The apex beat was in the first left intercostal space 3in. from the midsternal line. The sounds were clear. The left side of the chest moved more than the right. The right supra- and infra-clavicular fossae were deeper than those on the left side. The percussion note was impaired over the apex of the right lung with a few rhonchi over the area of impaired resonance. The day after admission he felt comfortable, but again spat up a little blood. There was also some bloodstaining of the nostrils as if his nose had been bleeding. The temperature rose to 100°. Three days after admission his temperature rose to 103° and he complained of feeling hot and of a sensation of something in his chest which he wanted to cough up. He was still spitting up small quantities of blood. The apex beat was then in the fourth left interspace 3in. from the midsternal line and its pulsations were easily visible and palpable. Examination of the chest showed the left supraclavicular fossa to be deeper than the right, together with flattening of the upper left chest. There was also less movement of the left side of the chest on respiration. Over the left upper lobe the percussion note was dull, but it became more resonant towards the base of the lungs. Over the area of impaired percussion the breath sounds were weak, but broncho-vesicular in type, and they became louder towards the base of the lung. A few moist rales could be heard over the left upper lobe. An X-ray examination of the chest on September 6th showed much dislocation of the mediastinum to the left. There was increased opacity of the lower lobe on the left side, but no pneumothorax. The apex of the right lung showed signs of tuberculosis. Next day the patient was still spitting up blood, but the breath sounds were much louder over the left upper lobe. The temperature still remained about 103°.

On September 8th the percussion note was still impaired over the left upper lobe, but the breath sounds were becoming louder. There was a friction rub about the angle of the left scapula, with impaired percussion note, crepitations, whispering pectoriloquy, and increased vocal resonance and fremitus at the base of the left lung. X-ray then showed that the left lung had expanded considerably and the mediastinal shadow had moved to the right.

On September 12th signs of consolidation were still present over the base of the left lung, with the temperature remaining at about 103°. X-ray on this date confirmed the findings of consolidation at the base of the left lung. On September 15th tubercle bacilli were detected in the sputum. The patient's general condition remained stationary for the next 10 days, with a temperature of 103°, and he was transferred to the Consumptive Home.

19. WIDELY DISSEMINATED EPITHELIOMA IN LYMPH GLANDS AND OTHER TISSUES PROBABLY OF SALIVARY GLAND ORIGIN.

(Under the care of Dr. de Crespigny, Honorary Physician.)

F. S., a male, *aet.* 70, a rabbit trapper by occupation, was admitted on April 20th complaining of lumps in his neck and under

his arms. Four weeks before admission he had noticed lumps on both sides of his face and under his arms for the first time. They were not painful and caused him no discomfort. About eight days before admission, after doing the round of his traps he began to shiver and felt as if he had a "cold." He said that he then had a temperature of 104°. At the same time the lumps began to ache and increase in size. His appetite had been poor previous to admission, but he did not think he had lost any weight. His bowels had acted regularly and he had no frequency or pain on micturition. He was a moderate smoker and drinker. His only previous illness was pneumonia five years ago. He was a married man whose wife and three children were quite healthy.

On admission his temperature was 98° F., pulse 100. The teeth were carious and there was considerable pyorrhoea. The tongue, which was coated with a white fur, could not be protruded more than about half an inch. The throat could not be satisfactorily examined owing to the inability of the patient to open his mouth widely. Examination of the lungs anteriorly showed a hyper-resonant percussion note with slight prolongation of expiration. Posteriorly the percussion note was impaired below the ninth rib on both sides with numerous coarse crepitations over the area of impaired resonance. Nothing abnormal was detected in the heart. The abdomen was not tender or rigid and moved well on respiration. The liver dullness extended from the sixth rib to 1in. below the costal margin in the mid-clavicular line, and its smooth edge could be felt. The kidneys and spleen could not be felt. In the left submaxillary triangle immediately anterior to the angle of the jaw there was a firm, smooth, rounded tumor about 2½in. in diameter. It was tender to firm palpation, and fixed to the ramus of the jaw, which it overlapped and which could not be distinguished from it. The skin could be moved over the mass. Immediately behind the angle of the jaw under the lobule of the ear there was a smaller tumor about the size of an almond which was not fixed to the deeper structures nor to the skin. In the posterior triangle of the neck on the left side there were about five similar small mobile tumors, and on the right side numerous other small tumors. In the left axilla there was a tender fixed tumor about the size of a hen's egg just behind the anterior axillary fold. There were several small glands in the right axilla. In each groin there were several discrete glands, varying in size from that of a marble to an almond. They were not fluctuant or tender. A blood examination made the day after admission showed no abnormality in the red cells and the white cells were in their normal relative numbers. An X-ray examination of the chest showed enlargement of both root shadows, which was thought to be due to glandular hypertrophy. There was also an irregular opacity at the right apex resembling apical tuberculosis. About 10 days after admission the gland in the left axilla became fluctuant and some thick yellow blood-stained pus was aspirated from it. This pus was found to contain pus cells and an occasional gram positive coccus which could not be classified. No tubercle bacilli, parasites, or spirochaetes were detected. The Wassermann reaction on the blood was negative. The day after admission the temperature rose to 102°, and then for about five weeks there was a daily variation between 99° and 102°. Three weeks after admission the gland under the angle of the jaw became fluctant and a good deal of pus was evacuated from it. Eight weeks after admission glands from the neck and groin were dissected out. Microscopically the gland from the groin showed

a deposit of a squamous cell epithelioma; that from the neck was a salivary gland with a small deposit of an epithelioma. Ten days later X-ray examination of the oesophagus showed no evidence of stricture or dilatation, nor was there any evidence of organic disease of the cardiac end of the stomach. The temperature and pulse now became normal, but the patient became progressively weaker. Radium therepy was applied to the glands in the neck, but no decrease in size was noticed. All the other glands remained about constant in size. Three months after admission his urine began to show albumen for the first time, and this albuminuria was still present when he was transferred to the Cancer Block on July 30th, where he gradually became weaker, and died on September 1st, 1927.

Autopsy No. 131/27 (*J. B. Cleland*).—There were very large malignant deposits in the neck, which seemed to infiltrate, or perhaps arise in, the left parotid gland. There was also ulceration and invasion of the left tonsil (possibly the growth had originated here), and the left aryteno-epiglottidean fold was swollen. There was a large mass of malignant tissue, breaking down with purulent fluid in its centre, in the posterior part of the left posterior triangle. The right tonsil was knobby, and apparently ulcerated. The papillae at the base of the tongue were converted into nodules. There was a mass of enlarged glands in the right axilla considerably larger than a walnut, with some pus present in the centres. There were masses of glands in the left axilla. There were some malignant plaques behind the upper part of the sternum. There were malignant deposits and plaques in the superior mediastinum around the great vessels and the bifurcation of the trachea. One gland near the bifurcation was discolored (greenish), and breaking down in the centre. There was a little malignant infiltration at the root of the left lung. There were masses of glands around the aorta and inferior vena cava, a number of them breaking down with purulent contents. The walls of these vessels were infiltrated, but the intima had not yet been reached. There were malignant deposits in the mesentery and a large mass in the gastro-hepatic omentum. There were rather knobby masses and a deposit in the pelvis opposite the middle of the sacrum and in the front of the lumbar spine. There was a malignant deposit near the left suprarenal, and in the right gland a deposit the size of a small marble containing a glairy fluid. In the subcutaneous tissues, over the left shoulder and right thigh more particularly, were little nodules the size of peas. A large gland in the left groin contained watery-looking purulent fluid in a cavity, but a large gland in the right groin was solid. There were no deposits in the liver or pancreas. The edges of the mitral valve were festooned with a raised rim of vegetations.

Sections were cut from a number of situations and showed a new growth varying somewhat in different parts, even in different parts of the same section, consisting of carcinoma cells, mostly spheroidal, sometimes large and irregular, and sometimes arranged in definite cell nests, the appearances suggesting an origin in a salivary gland. Thus a section of the right tonsil shows invasive squamous epithelioma in parts; tissue from near the parotid shows much fibrosis, a little necrosis and cell nests; the suprarenal deposits show cell nests, fibrosis and destruction of suprarenal cells and a skin nodule carcinoma cells and fibrosis.

Comment.—The pyrexia in this case was due to septic invasion of the cancerous glands. It is possible that the growth may have originated in the epithelial covering of the tonsil.

III.—SURGICAL CASES.

1. RING CARCINOMA OF THE DUODENO-JEJUNAL JUNCTURE.

(Under the care of Dr. Hone, Honorary Physician.)

L. H., a male, *aet.* 41, was admitted on March 19th with a history of having had fits and fainting attacks for the last 16 months. In 1916 he had an attack of malaria and was invalided home from the war. Ever since then he has been getting pains in the back and in the stomach. When he gets severe pains the fits come on. He bites his tongue in the fits and is very violent. Ever since he had malaria he has been of a pale yellowish color. He has had no indigestion. His appetite is good and the bowels are regular. He often has an attack of greenish diarrhoea following an attack of pain and sometimes vomits up greenish sour fluid and food.

On examination his temperature was 100.4° F., pulse rate 108, and respirations 20. He was a middle aged, pale, sallow man, groaning and rolling about in bed in pain. Examination of the abdomen showed tenderness all over but no rigidity. A firm nodular tumor could be felt above the umbilicus in the midline. There was marked tenderness on examination of the back from D12 to L4. The urine was normal. During his stay in hospital the patient had fits at times which were thought to be hysterical. He would vomit large quantities of bile-stained fluid. A blood examination showed the picture of a secondary anaemia. X-ray examination of the spine revealed nothing abnormal. The Wassermann test was negative. X-ray and barium meal showed delay in emptying of the stomach but no other abnormality to suggest disease of this organ. The patient developed a swelling of the nose, cheeks, and forehead, which was not red and did not have a definite edge. This latter condition finally cleared up, but the temperature still remained elevated and he died on May 5th.

Autopsy No. 58/27 (*J. B. Cleland*).—The body was greatly emaciated. The stomach and duodenum were considerably distended with dirty-looking fluid. The small intestines were rather collapsed. In the neighborhood of the duodeno-jejunal junction were large malignant-looking glands about the size of a walnut whose centres were breaking down. At this junction there was a ring carcinoma about 1½in. long, just admitting a little finger, presenting an everted edge above, but being very ragged and necrotic below. The head of the pancreas was infiltrated by the growth, but the rest of the pancreas was unaffected. The mesentery near its attachment to the small intestine showed small whitish plaques of new growth. The liver was of a pallid stone color. No lesions were detected in the brain. Microscopic examination of the growth showed that it was a typical columnar epithelioma.

Comment.—The growth appears to have been a primary columnar epithelioma of the duodenum at its junction with the jejunum where it had produced a typical ring carcinoma.

2. CASES ILLUSTRATING CARCINOMATOUS DEPOSITS IN BONE.

(*a*) Carcinoma of the Stomach with Deposits in the Calvarium.

(Under the care of Dr. de Crespigny, Honorary Physician.)

C. L., a married woman, *aet* 34, was admitted on October 15th. She had felt quite well until July when she began to get a burning

pain at the lower end of the breast-bone immediately after having anything to eat or drink. She consulted a doctor who prescribed some medicine which relieved her. For the next two months she felt well, but in September she got pains in the lower end of her spine, at the back of the neck, and down her arms. These pains continued up till the time of her admission into hospital, when she again got the pains at the lower end of the breast-bone. Her appetite had been poor and she had lost about two stone in weight in two months.

On admission she was a thin woman, in no evident pain, lying quietly in bed. Her temperature was 99°, pulse 105, and respirations 24. Both eyes were rather prominent, the pupils being large and reacting to light and accommodation. The fundi appeared normal. Over the right external angular process there was a small, rounded firm mass attached to the deeper structures. There was no enlargement of the thyroid and the heart was normal. Examination of the lungs disclosed scattered crepitations in both axillary regions. The abdomen moved well with respiration, and there was no tenderness or rigidity. The liver was not enlarged, and no organs or masses could be felt. The reflexes were equal on the two sides, and the urine contained no abnormal constituents. Her general condition remained unchanged for five days, except that she was drowsy but could be easily roused. Then she developed a complete left-sided facial paresis. Lumbar puncture was performed, and the cerebro-spinal fluid was found to contain no excess of cells and no micro-organisms and no increase of globulin. The mass from the right frontal region was removed and on section was seen to be a malignant epithelial new-growth with numerous mitotic figures present. She continued to be drowsy, but otherwise there was no change in her general condition until seven days later, when besides the facial paresis she had skew deviation of the eyes and diplopia on looking to the left. X-ray examination showed abnormal opacities throughout both lungs, especially in the perihilar regions. These were thought to be metastases. There was also a worm-eaten appearance of the cranial vault, evidently bone metastases, but no metastatic areas could be seen in the spinal column. Her general condition gradually became worse, and she died on November 5th.

Autopsy No. 177/27 (*R. L. T. Grant*).—The body was emaciated. The fundus of the stomach showed a leather-bottle carcinomatous infiltration and enlargement of the adjacent glands. There were several metastases in the upper part of the liver and many covering the inferior surface of the diaphragm. There were miliary metastases in the lungs, especially in the left lower lobe, which also showed red hepatization. There were deposits in the bronchial glands. The left ovary was the size of a tangarine orange and showed many metastases, the right being slightly enlarged and also with many metastases. The pelvic and lumbar glands were enlarged from deposits. About 1oz. of thymus tissue was still present. The inner table of the calvarium was studded with metastases which had in some places penetrated through the bone to beneath the scalp. There were metastases in both middle fossae and in the dura mater. Over the right eyebrow there was a deposit on the surface. Haemorrhage had taken place in the vicinity of this dural deposit, and had spread extensively in the dura mater right back to the occipital lobe. The brain showed no sign of involvement.

Microscopic examination of the stomach growth showed diffuse infiltration with cancer cells, often in large masses with necrosis.

There were similar deposits in large masses in the ovaries. Sections of the skull showed spheroidal cells in considerable masses in a fibro-cellular stroma with little remnants of bone left here and there.

That metastases in the vertebral column may give rise to the first signs and symptoms in a case of carcinoma is well known, but it is much rarer for the secondary deposits in the calvarium to be the predominating clinical feature.

(*b*) Carcinoma of the Male Breast, with a Secondary Deposit in the Femur.

(Under the care of Dr. Smeaton, Honorary Surgeon.)

W. D., a male, *aet.* 55, was admitted on October 10th complaining of pain in the left knee and thigh which he attributed to having twisted his leg eleven months ago. The pain had been localised to the outer side of the knee joint and lower third of the thigh. He had been obliged to walk with the aid of a stick since the accident. One month ago he fell and injured the middle of the left thigh, and since then the pain in the knee had been aggravated, coming on whenever he attempted to put his foot to the ground, and occasionally when at rest. The knee had never been swollen. The bowels were regular and he had had no trouble with micturition. He had not lost any weight. He denied venereal disease. His wife and five children were healthy.

On examination the temperature was 97°, pulse 82. The patient was extremely obese, weighing over 16 stone. The nipple of the left breast was retracted and a stony hard mass, about the size of a small marble, was palpable just to its outer side. It was adherent to the skin but not to the underlying muscle. The axillary glands were palpable. The left leg was everted and slightly flexed at the hip joint. There was no muscular wasting. There was no pain or crepitus on passive movement of the knee joint. There was limitation of movement in all directions of the hip joint. The left leg was 2in. shorter than the right. There was slight bony hypertrophy palpable in the region of the left great trochanter. Owing to the obesity of the patient, it was difficult to map out accurately Bryant's triangle and Nelaton's line. On standing the patient out of bed, the body weight was taken on the right leg, the left being abducted and everted and slightly flexed with the toes pointing to the ground. A radiograph taken on the 26th October showed a pathological fracture of the upper part of the shaft of the left femur with an irregular process of absorption of the bony tissue, probably due to malignant infiltration. The case was considered to be one of secondary malignant deposit of the femur from a primary carcinoma of the left breast. The growth of the left breast was removed on November 1st, and on section proved to be carcinomatous. Further operation was considered useless.

(*c*) Malignant Thyroid Deposit in the Femur, following Removal of a "Benign Adenoma."

(Under the care of Dr. Newland, Honorary Surgeon.)

Mrs. D., *aet.* 40, was admitted on April 17th, 1924, with a history of a swelling in the neck of eleven years' duration, which had increased in size latterly. Nervousness and palpitation had been present for some time, and she had lost one and a half stones in weight during the last four months. Two years ago she had suffered with nagging pain in the left thigh which kept her in bed for one

week. On examination the pulse was 118, and the temperature normal. The hair was sparse, the outer ends of the eyebrows being absent. No exophthalmos was present. There was an obvious swelling on both sides of the midline of the neck, which moved with deglutition. The swelling was symmetrical and soft in consistence and not fixed to the skin or deeper tissues. There was a slight tremor of the hands.

On April 26th a partial thyroidectomy was performed by Dr. H. S. Newland. A microscopic section was made which showed a benign adenoma with calcareous degeneration. The patient made an uninterrupted recovery.

The patient was re-admitted on the 24th March, 1925, with the history that the attacks of pain in the left thigh were increasing in intensity and frequency. Three months before the patient had noticed a swelling in the upper part of the left leg which had not increased in size at all rapidly. She had lost no weight. On examination of the left leg a fusiform, smooth swelling, about 2½in. in length, was present, apparently arising from the upper part of the femoral shaft. Some tenderness was experienced on palpation. The overlying soft tissues were normal. A radiograph on the 20th March suggested the picture of an endosteal sarcoma of the left femoral shaft. The Wassermann and hydatid tests were negative. An exploratory incision was made over the outer aspect of the swelling on the 4th April, which revealed the presence of a very vascular bony tumour of comparatively soft consistence from which a section was taken. Microscopical examination showed a malignant new growth of thyroid tissue. A radiograph of the spine and pelvis was normal.

On the 18th April, 1925, the previous incision was opened and radium needles were inserted for 36 hours into a cavity produced by curettage of the growth. On the 24th April the leg had an exposure to X-rays, and afterwards was put up in plaster and the patient discharged, walking fairly well. On the 4th September the patient was re-admitted. She had been very well since her last operation until two weeks before, when her left leg suddenly gave way under her, and she fell to the ground and could not walk afterwards. On examination the left leg was slightly flexed and externally rotated. The deformity was most marked in the situation of the previous operation scar. Abnormal mobility and crepitus and 2in. of shortening were present. A Thomas' knee splint with weight extension was applied. A radiograph showed a fracture at the site of the growth in the femur. On the 10th September an amputation through the upper third of the shaft of the femur above the growth was performed. The patient was discharged on the 22nd October with the wound practically healed.

On the 20th June, 1926, the patient consulted Dr. Turner privately on account of pain in the amputation stump. A radiograph of the stump was negative. A disarticulation of the remainder of the femur at the hip joint was performed, the sciatic nerve being exposed as high as possible.

The patient was re-admitted to hospital on the 7th March, 1927, on account of severe pains in the region of the left hip. She had lost weight and slept badly owing to the constant pain. A radiograph showed the presence of a malignant deposit in the left os innominatum. Sedatives were administered for the pain. The patient gradually became comatose and died two weeks later, the actual cause of death not being certain.

Comment.—A re-examination of the sections cut from the original thyroid enlargement and of the deposit in the bone confirmed the original opinion that no evidence of malignancy could be found in the thyroid, while the deposit possessed typical characteristics of a carcinoma of thyroid tissue.

3. SPINDLE-CELLED SARCOMA OF THE LEG DEVELOPING IN A HAEMATOMA DUE TO TRAUMA.

(*Under the care of Dr. de Crespigny, Honorary Physician*).

A. D., a male, *aet.* 42, was admitted on the 17th August with a history that two years before admission he had injured his left leg by being dragged by a bolting horse. Within half an hour of the accident the leg swelled and became blackened at the site of the injury. The swelling has remained about constant in size (now measuring 19in. in circumference). After the accident he was treated by a doctor with massage and radiant heat, but no improvement resulted. Six months later he began to get symptoms suggestive of a duodenal ulcer. An X-ray examination together with an opague meal indicated spasm of the duodenal bulb without any abnormality in size, shape, or position of the stomach. He was then treated with alkaline powders, and remained free from pain until two weeks before admission, when he developed pains in both sides of the chest on breathing. These pains became so severe that he consulted his doctor, who said he had pleurisy, and ordered him into hospital.

On admission he was found to have an effusion into his left pleural cavity extending up to the third rib in front, together with many crepitations below the angle of the scapula on the right side. There was no tenderness or rigidity in the abdomen, and none of the organs were palpable.

On the left leg about the calf there was a firm, rounded swelling 19in. in circumference, which was not tender, and had been present ever since his accident. Thirty ounces of blood-stained fluid were aspirated from the left pleural cavity, and the fluid found to contain numerous red blood cells, an occasional lymphocyte and polymorphonuclear cell, but no tubercle bacilli or other micro-organisms. An X-ray examination of the chest showed a large left-sided pleural effusion together with mutiple rounded opacities in the right lung field suggestive of malignant metastases. An X-ray of the leg disclosed no affection of the tibia or fibula in the region of the soft-tissue swelling. The patient's general condition became gradually worse, and he died on 3rd November.

Autopsy No. 175/27 (*J. B. Cleland and H. G. Anderson*).—There was a large neoplasm in the muscles of the left calf not connected with the bone. Above this was a similar nodule. There were numerous nodules in the lungs, especially in the lower part of the left lung. The secondary deposits were soft and gelatinous. Some haemorrhage had taken place into some of the pulmonary growths. The growth proved microscopically to be a spindle-cell sarcoma. In the stomach at the pylorus was found a chronic ulcer 2in. x 2½in. in size with a much thickened fibrotic base. The bronchial and mediastinal glands were enlarged.

Comment.—The interest of this case lies in the fact that a very malignant type of sarcoma originated in a traumatic haematoma.

4. A CASE OF OSTEOMYELITIS OF THE LUMBAR VERTEBRAE FOLLOWING KICKS.

(Under the care of Dr. Corbin, Honorary Surgeon.)

N. W., a male, *aet.* 10, was admitted on 6th May, 1926, with the history that on the 1st April, when he was at school, one of his playmates attached a card to the seat of his trousers, bearing the following inscription: "Please kick me." He stated that many were only too willing to oblige, and since then he had had tenderness over the lower end of his spine, getting worse during the last few days, and had had pains in the thighs, and he could not straighten his legs on account of pain in his back. A lumbar puncture was performed by his medical attendant, but only a bead of pus was obtained, which on microscopical examination contained staphylococci. On admission his temperature was 99°, pulse 88. The patient was conscious and very intelligent. On examination rigidity of his neck was present, attempted movement causing him much pain. There was extreme tenderness over the fourth and fifth lumbar vertebrae and sacrum. The abdomen moved very slightly on respiration, and tenderness was present, most marked in the umbilical and hypogastric regions. Kernig's sign was present in both legs, the knee jerks were equal and active, the plantar reflex was flexor in type. The patient was lumbar-punctured, and drops of thick pus issued from the needle. Two days after admission, under general anaesthesia, Dr. Corbin inseted a needle into the right kidney pouch, having previously detected a fulness in this region. About 1oz. of thick, blood-stained, yellow, purulent material was withdrawn, and an incision was then made, opening up the perinephric tissues, but no pus was found. A tube was inserted, and the skin edges brought loosely together. Four days later his temperature was still elevated, and he had paresis of the limbs, any movement of the legs causing him to cry out in pain. The following day, under general anaesthesia, a laminectomy of the fourth lumbar vertebra was performed, and a large quantity of pus which was extradural was obtained. A drainage tube was inserted, and the skin drawn together with silkworm sutures. The patient improved after operation, his neck rigidity and paresis practically disappearing, but his temperature remained elevated. A blood culture showed the presence of *Staphylococcus aureus*. The wound discharged freely until his death from pneumonia 10 days later. No autopsy was performed.

5. FORTY-SIX CASES OF RUPTURED GASTRIC OR DUODENAL ULCERS SHOWING SEX INCIDENCE AND OPERATION STATISTICS.

(Compiled by the Surgical Registrar, Dr. R. B. Jones.)

The following table gives statistical records of all the cases of ruptured gastric or duodenal ulcer admitted to the Adelaide Hospital during the years 1924-1927. The summary emphasises the supreme importance of early diagnosis and early operation, the mortality rapidly rising from 7 per cent. to 50 per cent.

Case No.	Sex	Age.	Date of Admission.	Type.	Duration of Acute Symptoms	Operation.	Complications.	Result.	Days in Hospital.	Symptoms after Discharge.	Subsequent Operation.
1	M	55	31.10.24	Duodenal	36 hours	Closure and drainage	Nil	Recovery	25	Not ascertainable ..	Gastroenterostomy
2	M	27	14.7.24	"	48 hours	Closure and drainage	Nil	"	24	Not ascertainable ..	Gastroenterostomy
3	M	51	9.9.25	"	6½ hours	Closure and drainage	Pneumonia	"	19	Not ascertainable ..	Nil
4	M	36	26.8.25	"	16 hours	Closure and drainage	Pneumonia	"	42	Not any	3 weeks later gastroenterostomy
5	M	35	7.9.25	"	4 hours	Closure and gastro-enterostomy	Nil	"	17	Not ascertainable ..	Nil
6	M	47	23.5.24	"	6 hours	Closure and drainage	Empyema, subphrenic abscess, pericarditis	Death	8	—	—
7	M	34	10.11.24	"	6 hours	Closure and gastro-enterostomy	Nil	Recovery	25	Not ascertainable ..	Nil
8	M	38	6.11.25	"	3 hours	Closure and drainage	Nil	"	21	Not ascertainable ..	Nil
9	M	35	5.6.24	"	8 hours	Closure and gastro-enterostomy	Empyema	"	120	Death from cerebral abscess	Nil
10	M	27	4.1.25	"	38 hours	Closure and drainage	Stitch abscess	"	33	Not ascertainable ..	Nil
11	M	34	1.5.25	"	22 hours	Closure and drainage	Peritonitis	Death	1	—	—
12	M	48	29.4.25	"	5 hours	Closure and drainage	Nil	Recovery	19	Not ascertainable ..	Nil
13	M	43	23.5.26	"	5 hours	Closure and drainage	Suppuration of wound	"	42	Pain and flatulence after food, subsequent pyloric obstruction	Gastroenterostomy
14	M	49	4.12.26	"	7 hours	Closure and gastro-enterostomy	Peritonitis	Death	7	—	—
15	M	57	1.12.26	"	6 hours	Closure and drainage	Nil	Recovery	35	Pain, flatulence, and occasional vomiting after food	Nil
16	M	46	5.10.26	"	7 hours	Closure and drainage	Nil	"	17	Not ascertainable ..	Nil
17	M	49	8.10.27	"	6 hours	Closure and gastro-enterostomy	Nil	"	16	Not ascertainable ..	Nil
18	M	53	25.10.27	"	18 hours	Closure and drainage	Pneumonia, suppuration of wound	Death	34	—	—
19	M	27	10.10.27	"	20 hours	Closure and drainage	Suppuration of wound	Recovery	24	Not ascertainable ..	Nil
20	M	41	26.9.27	"	6 hours	Closure and drainage	Nil	"	24	Not any	Nil
21	M	47	21.9.27	"	5 hours	Closure and drainage	Nil	"	24	Haematemesis 6 weeks later	Nil
22	M	42	3.9.27	"	6 hours	Closure and gastro-enterostomy	Peritonitis	Death	3	—	—
23	M	42	19.8.27	"	3 hours	Closure and gastro-enterostomy	Nil	Recovery	22	Not ascertainable ..	Nil
24	M	28	7.8.27	"	8 hours	Closure and gastro-enterostomy	Nil	"	18	Not ascertainable ..	Nil
25	M	39	26.6.27	"	11 hours	Closure and drainage	Suppuration of wound	"	23	Not any	Nil
26	M	62	5.3.27	"	8 hours	Closure and drainage	Pneumonia	Death	7	—	—

27	M	50	22.2.27	Duodenal	36 hours	Closure and gastro-enterostomy	Nil	Recovery	30	Flatulence, pain after food, and haema-temesis	Gastroenterostomy 6 months later
28	M	44	15.5.24	Gastric	6 hours	Closure and drainage	Nil	"	31	Slight pain and flatu-lence after food	Nil
29	M	32	10.3.25	"	6½ hours	Closure and drainage	Lung abscess	"	150	Not ascertainable ..	Thoracotomy
30	M	62	29.11.23	"	26 hours	Nil	Peritonitis	Death	1	—	—
31	M	31	15.12.25	"	24 hours	Closure and drainage	Peritonitis	"	1	—	—
32	M	28	19.12.25	"	5 hours	Closure and drainage	Nil	Recovery	20	Not ascertainable ..	Nil
33	M	41	16.8.24	"	6 hours	Closure and drainage	Nil	"	11	Not ascertainable ..	Nil
34	M	53	21.7.24	"	72 hours	Laparotomy and drainage	Peritonitis, subphrenic abscess	Death	5	—	—
35	F	37	6.2.25	"	18 hours	Closure and drainage	Peritonitis	"	2	—	—
36	F	63	26.2.25	"	24 hours	Closure and drainage	Nil	Recovery	17	Not ascertainable ..	Nil
37	M	33	17.11.25	"	6 hours	Closure and drainage	Nil	"	23	Not ascertainable ..	Nil
38	M	30	8.6.26	"	12 hours	Closure and drainage	Nil	"	23	Not ascertainable ..	Nil
39	M	27	28.5.26	"	4 hours	Closure and drainage	Nil	"	27	Not ascertainable ..	Nil
40	M	33	28.12.27	"	14 hours	Closure and drainage	Nil	"	14	Not ascertainable ..	Nil
41	M	41	29.7.27	"	5 hours	Closure and drainage	Nil	"	17	Flatulence, pain after food	Nil
42	M	51	28.7.27	"	8 hours	Closure and drainage	Suppuration of wound	"	34	Pain and flatulence after food	Nil
43	F	30	2.3.27	"	5 hours	Closure and drainage	Nil	"	15	Pain and flatulence after food	Gastroenterostomy 9 months later
44	M	37	16.2.27	"	5 hours	Closure and drainage	Nil	"	14	Pain after food	Gastroenterostomy 3 months later
45	M	54	13.2.27	"	8 hours	Closure and drainage	Pneumonia	"	16	Not any	Nil
46	M	42	8.1.27	"	6 hours	Closure and drainage	Nil	"	20	Pain and flatulence after food	Gastroenterostomy 3 months later

SUMMARY.

46 cases of ruptured ulcer with an immediate death rate of 20%.
41% Gastric Type ..... 84% males, 16% females.
59% Duodenal Type ..... 100% males.

	No. of Cases.	Mortality.
Operation performed within 7 hours of onset	25	7%
Operation performed 7 to 13 hours from onset.....	7	12·5%
Operation performed 13 to 19 hours from onset.....	4	50%
Operation performed after 19 hours from onset	10	*33·3%

* This apparent discrepancy is probably due to the fact that the initial symptoms in these cases were those of a leaking ulcer with subsequent rupture.

Mortality of types of operation—
Simple closure and drainage within 7 hours, 6%.
Simple closure and drainage over 7 hours, 35%.
Closure and gastroenterostomy (these cases, with one exception, were operated within 8 hours of the onset), 25%.

6. CASES ILLUSTRATING LESIONS OF THE MESENTERY.

(Compiled by the Surgical Registrar, Dr. A. Britten Jones.)

(*a*) Traumatic Rupture of the Mesentery.

(Under the care of Dr. Smeaton, Honorary Surgeon.)

A. M., a male, *aet.* 23, was admitted at 6 p.m. on the 6th of September, 1926. He had been crushed between the drawbars of some railway trucks five hours previously. He complained of pain in the lower part of the stomach where he had been struck by the buffer. He had not vomited but had perspired freely. He had lunched about one hour previous to the accident. He had not passed water since 10 a.m.

On examination the patient presented the picture of severe shock. He was lying on the left side with the knees drawn up. The temperature was 96°, pulse 108 and of poor volume, and respirations 24. The heart sounds were normal. The liver dullness extended from the sixth rib to the costal margin in the mid clavicular line. The lungs were normal. There was a semilunar abrasion measuring 1in. in length and 2ins. at its widest portion on the abdominal wall situated to the left of the midline below the umbilicus. There were smaller abrasions on the right side. The abdomen looked full but moved with respiration. The percussion note was dull from the pubes to midway between the symphysis and umbilicus. There was no moveable dullness in the flanks. On palpation the outline of the distended bladder could be distinguished. There was no abdominal tenderness but pressure caused pain referred to the left shoulder blade. No signs of injury to the spine were present. The reflexes were normal. The patient was catheterised and about 10ozs of clear urine were withdrawn. Two hours after admission signs of dullness in the flanks appeared, the patient complaining of severe pain, but the pulse rate remained unaltered. At 10 p.m. the same evening the patient had responded well to anti-shock treatment, the pulse had dropped to 96 and the pain was easier. He had not vomited. After 3 a.m. the following morning the pulse steadily increased in rate until 8 p.m., when it was 132 per minute. He had vomited undigested food once during the night. He was restless and presented the typical picture of intra-abdominal haemorrhage. Operation was performed at 8.30—19 hours after the onset. The abdomen was opened through a midline subumbilical incision. A large quantity of free blood was present in the peritoneal cavity. A circular rent 2ins. in diameter was present in the mesentery of the small intestine. About 2ft. of the bowel which had thus been cut off from its blood supply was becoming gangrenous. Excision of this portion was performed. Tubes were inserted into the proximal and distal ends of the bowel which were brought in a parallel condition to the surface. The abdomen was then closed, drainage of the abdominal cavity being provided for. Post-operative shock was combated with saline and glucose *per rectum*, warmth, and morphia. Vomiting became frequent. A large quantity of intestinal contents were evacuated through the Paul's tube, and the patient was obviously becoming dehydrated. To combat this an end-to-end anastomosis was performed two days later. The patient died 24 hours later.

(*b*) Rupture of a Branch of the Superior Mesenteric Artery.

(Under the care of Dr. Newland, Honorary Surgeon.)

A. R., a male, *aet.* 50, was admitted on November 11th. He had been seized with a sudden severe pain situated about the centre of the abdomen 12 hours previously. The pain had shifted to the right side soon after the onset, and had remained there. It had increased

in intensity and made him roll about in agony. The patient had vomited a greenish sour fluid on two occasions since the onset of the pain. The bowels had been opened twice on the day previous to admission after taking a dose of salts. The bowels were usually regular, but he had noticed the motions were light colored on several occasions. He had never been jaundiced. He had suffered with indigestion after food—dull aching pains in the right upper abdomen shooting through to the right shoulder blade and accompanied by flatulence. There was no history of a previous similar attack, and apart from accidents and minor respiratory maladies his general health had been excellent. He denied having had venereal disease.

On examination the patient was very restless and obviously in acute pain. The temperature was 97°, pulse 72, and respirations 20 per minute. The right pupil reacted to light and accommodation, and the sclerotic was normal in color. The left eye was artificial (the result of an accident). The tongue was dry and coated with a brownish fur on the dorsum. The heart and lungs were normal. The liver dullness extended from the sixth rib to the costal margin in the midaxillary line. The abdomen moved with respiration. There was a resistance to palpation in the right hypochondrium with some impairment of the percussion note. Pressure all over the abdomen caused him pain referred to the right umbilical quadrant. The maximum tenderness was over a point situated 1in. to the right of the navel. Rectal examination revealed nothing abnormal. The reflexes were normal. The urine was alkaline, of specific gravity 1018, and contained no abnormal constituents. The white blood cells numbered 8,000 per c.mm. The patient was given morphia gr. 1/6 hypodermically, and on the following day (November 5th) seemed much improved. He had slept well, and the pain had practically gone. On the following three days he complained of a continuous dull aching pain in the right side of the abdomen. The tenderness was still present. The temperature had reached 99.4° daily, and the pulse rate fluctuated between 90 and 100. On the 11th the patient had a shivering attack, but it was not accompanied by a subsequent high temperature. A cholecystogram suggested a pathological gall bladder. The urine was examined microscopically, but no organisms were present. The urea concentration test was within normal limits. The Wassermann reaction was negative. A diagnosis of acute cholecystitis was made and the abdomen was opened through a right upper paramedian incision on November 12th. On incising the peritoneum a gush of dark blood occurred. The liver and spleen were rapidly examined and found to be normal. On further palpation a mass was found in the root of the mesentery. The corresponding portion of small intestine was then delivered; its mesentery was half an inch in thickness near its attachment to the bowel, gradually increasing, and at its root formed a swelling about the size of a hen's egg, containing clotted blood. One half of the mesentery had ruptured, accounting for the free blood within the peritoneal cavity. In an endeavor to control the haemorrhage the root of the mesentery was accidentally torn, the rent admitting a closed hand; the bleeding was finally arrested by passing a ligature on a needle through the root of the mesentery. On gently clearing the clot away a profuse arterial haemorrhage occurred. The corresponding loop of bowel (about 12in. long), which was normal in appearance, apart from some congestion, was clamped and excised together with a V-shaped portion of the mesentery. This step was deemed necessary on account

of the interference with the blood supply of the loop owing to the ligature passed and the tearing above referred to. A lateral anastomosis was performed, and the abdominal wound closed in layers without drainage. The patient was suffering from a severe degree of shock after the operation, the pulse being 140 and of weak volume. His general condition improved in the next 12 hours, the pulse falling to 84. During the night troublesome hiccough and vomiting set in, the abdomen became distended, and no flatus or faeces were passed. The vomited material measured 36ozs., and was dark-brown in color with a strong coliform odour. The patient was evidently suffering from acute ileus. It was decided to give human bile and saline *per rectum* as recommended by R. St. Leger Brockman in his Arris and Gale Lecture to the Royal College of Surgeons, March, 1927. Two ounces of bile and 4ozs. of normal saline were given *per rectum* 4-hourly. After the first injection the patient passed flatus, but the vomiting continued and amounted to 38ozs. in the following 12 hours. Two of the injections were returned practically immediately. Fifty-four ounces were vomited during the following 24 hours, the signs and symptoms of ileus still being present. On the evening of the 14th the seventh injection of bile and saline was returned with faeces and flatus. The following morning the bowels acted freely on four occasions, the distension and hiccough disappeared, and from then onwards he made an uneventful convalescence. He was discharged on December 12th.

Comment.—The case at operation was thought to be one of ruptured mesenteric aneurysm, but subsequent preparation and dissection of the specimen by Professor Woollard at the Anatomy School of the University showed no evidence of aneurysm, the walls of the artery being normal. Apparently a branch of the superior mesenteric artery had ruptured, the cause being undetermined, and haemorrhage had occurred between the leaves of the mesentery, which finally gave way, giving rise to an intraperitoneal collection of blood.

The treatment of the ileus with human bile was successful in this case, but not until eight injections had been given. Of these only three were retained for any length of time. The bile, even in the small quantities administered, was apparently irritating to the rectum, which naturally interfered with its absorption. In future cases it is suggested that a further dilution of the bile and washing out of the rectum preparatory to each injection be given.

(*c*) Probable Mesenteric Thrombosis with Recovery.
(*Under the care of Dr. B. Smeaton, Honorary Surgeon.*)

Mrs. M. P., *aet.* 56, was admitted on the 2nd July. She had been seized with a sudden severe pain in the upper part of the abdomen on the right side two days previous to her admission. The pain had been persistent. It radiated to the right shoulder. She had vomited frequently since the pain occurred. The bowels, usually regular, had been constipated since the onset, although she had had a small action 24 hours before. There had been no melaena, jaundice, or difficulty with micturition. There was no history of previous attacks, and her general health had been good.

On examination the temperature was 99°, pulse 102, and respirations 22 per minute. The tongue was clean but dry. The heart and lungs were normal. The abdomen moved with respiration. There was rigidity and tenderness to palpation on the right side extending from the costal margin to below the umbilicus. No tumor could be palpated, and no signs of fluid were present in the flanks. Pelvic

examination was negative. The knee jerks were equal and active, the plantar reflex being flexor in type. No varicose veins were present. The urine was normal. On the following day the temperature and pulse were still elevated, the bowels had not been opened, but the pain was easier. On July 5th the patient was given a soap and water enema with a good result, the motion being normal. A diagnosis of acute cholecystitis was made, and an operation was performed the same afternoon. The abdomen was opened through a right pararectal incision, and a slight amount of blood-stained peritoneal fluid escaped. The gall bladder was examined, and found to be normal. A muscle-splitting incision was then made with its centre over McBurney's point. On opening the peritoneum more blood-stained fluid escaped. The small bowel was examined, and about 2ft. from the ileocaecal valve the mesentery of the ileum was seen to be thickened and congested. Its vessels could be felt pulsating. The corresponding portion of the ileum, measuring 15in. in length, was distended and congested. Its walls were thickened. It was bathed in saline, and considered to be viable. The pelvic organs were palpated and, apart from a small pedunculated fibroid of the uterus were normal. A drainage tube was inserted into the pelvis, and both incisions closed. No growth was present in the culture media inoculated with a swab taken from the fluid within the abdomen. The patient stood the operation well. On the second day calomel gr. iii. and mag. sulph. were given without result, but a normal motion followed a soap and water enema. On July 12th the patient complained of a sudden pain in the right side of the chest accompanied by an irritating cough. The pulse and temperature were raised, and on examination a friction rub was audible at the right base posteriorly. Signs of consolidation followed, and the patient was very ill for three days. She gradually improved, and the signs at the right base cleared up. She was discharged on the 4th of August. Both wounds had healed, and the bowels were functioning normally.

Comment.—The following points are of interest in this case:—

1. The condition was believed to be due to mesenteric thrombosis though a volvulus which had untwisted may have been the cause.
2. There was no history of the passage of blood or mucus in the stools.
3. The interference with the blood supply of the affected portion of ileum was not complete, the bowel being subsequently proved to have been viable.
4. No primary cause could be found for the thrombosis in the previous history or on careful examination.
5. The pulmonary condition was probably due to an embolus.

(7) Three Cases of Intestinal Obstruction, Due to Gall-Stones.

(Compiled by the Surgical Registrar, Dr. R. B. Jones.)

Case I.—H.B., a woman, *aet.* 66, was admitted on April 29th, 1926, with a history of sudden pain in the left side of the abdomen of six days' duration. Vomiting had followed immediately, and had continued ever since at frequent intervals. The vomit was now brownish in color. The bowels were constipated from the onset. Enemas had been given every day with good results. The patient had been troubled with wind since the illness began, never previously, although she had had what she described as a "nasty feeling in the stomach

for a long time.'' On examination, the pulse was 92, temperature normal. A fulness was present over the left upper abdomen. The spleen was palpable, its lower pole descending for about 2½in. below the costal margin. Urinalysis showed the presence of acetone and diacetic acid. The vomitus had a coliform odor, and was alternately brownish and greenish in color. There was a leucocytosis of 30,000 per c.mm., the red blood cells numbering 4,800,000 per c.mm., the haemoglobin being 86 per cent., and the color index 0.8. A differential blood count was normal. The patient was treated expectantly for six days. During this time the vomiting continued, but very little abdominal distension was present. The bowels had been opened on three occasions with the aid of enemas. On the seventh day visible peristalsis was present for the first time. Operation was advised, but the patient's condition became rapidly worse, and she died the same evening.

Autopsy No. 89/28 (*J. B. Cleland*).—The lower coils of the small intestine were collapsed. The upper 3ft. of the jejunum were distended and discolored, and in places congested, but the sheen was still present. About 2½ft. from the duodeno-jejunal junction the bowel wall was slightly adherent to the splenic flexure. On removing it, two transverse ulcers were found, which had nearly destroyed the serous coat, and appeared as yellow necrosed patches, with congestion around. Just below this, loose in the intestine, was a cylinderical gall stone, fractured into three pieces, one fracture recent, the other older. The three pieces measured 3¾in. long and 1in. in thickness, and, placed together, formed a cylindrical torpedo-shaped structure, dark in color for the most part. The contents of the gut were foul and fluid at this spot. There were adhesions between the contracted gall bladder and the transverse colon. There was an orifice admitting a large little finger, leading from the gall bladder into the second part of the duodenum, in length about 2in. This orifice was much smaller than the present size of the stone. There were no other lesions of moment, beyond a much enlarged spleen 9in. long and weighing 34ozs.

Case II.—C.P., a married woman, *aet.* 84, was admitted on July 25th, under Dr. Newland, with a history of sudden severe pain in the right side of her abdomen of three days' duration. Vomiting had commenced 12 hours after the pain, and both had been continuous since. The vomitus now consisted of brownish fluid. The bowels had not been opened for the past two days, in spite of an enema. There was a history of ''indigestion'' for years, and a similar attack to the present one two years ago. On examination her tongue was dry and brownish fur was present on the dorsum. The abdomen was not distended. No mass was palpable. There was slight tenderness on palpation in the right iliac fossa. The urine was normal. She was left under observation for 36 hours, during which period she became slightly distended, and the vomiting continued at very frequent intervals. Three enemas produced no result. Under local anaesthesia a coeliotomy was performed. A gallstone was found impacted in the small intestine (? site). The bowel was not distended, but was engorged and flakes of adherent lymph were present. The patient was collapsed after the operation, and she died eight hours later.

Autopsy No. 85/20 (*C. T. Turner*).—There were adhesions between the gall bladder and the duodenum, just beyond the pylorus. There was a small stone in the common duct, and an ulcerated pocket in the duodenum. The bowels were distended above the colostomy opening, empty below it. There was a little punched-out ulcer 3ft. from the commencement of the jejunum. It was transverse in situation, and

¼in. long, with a raised, thickened base exposing the muscle. A small perforation the size of a grain of wheat, was present on the peritoneal surface, near the mesenteric attachment; 18in. lower down was another ulcer, rather superficial, with a ragged appearance, and there were two more ulcers still further down. The liver was fatty and mottled.

Case III.—Mrs. R., *aet.* 69, was admitted on August 28th, 1920, under Dr Smeaton, with a history of upper abdominal pain of three weeks' duration. The pain commenced on the right side and radiated to the right shoulder. It was severe, and doubled the patient up. She had had nausea, but no vomiting, until five days ago when it came on after taking food, and later independently occurring every 15 to 30 minutes. The vomitus was at first greenish fluid, and later dark and offensive. The bowels had been regular throughout the illness. There was a history of a similar attack of pain and vomiting two years before. On examination, the pulse was 84, temperature normal. The sclerotics showed a yellowish tinge. Tenderness was present on palpation of the right upper quadrant of the abdomen, but there was no rigidity. The urine contained bile. An emergency operation was performed by Dr. Smeaton, after pituitrin and an enema had been given, with no result. A sub-umbilical midline incision was made, and a gallstone, the size of a walnut, was found to be impacted in the lower ileum. As the patient's condition was low at this stage, the bowel was not opened, but the stone was manipulated into the ascending colon. The patient did not rally after the operation, and died the same evening.

Autopsy.—The ileum at the site of the previous obstruction was discolored and approaching necrosis. The stone had ulcerated from the gall bladder into the duodenum, the site being covered with adherent omentum.

Comment.—In the three cases reported above symptoms referable to the gall bladder had been present previously. The diagnosis of these cases is most difficult, the signs and symptoms usually pointing to a high obstruction of the intestine, which is often not complete at first owing to the stone being disimpacted previous to its final impaction lower down in the intestine. In Case III. the autopsy showed that the ileum at the site of the obstruction was approaching necrosis. This apparently is very rare, as Jonathan Hutchinson, in his "Archives of Surgery," Vol. I., had never noted it in a large series of cases of intestinal obstruction with gallstones. The following recent reports on intestinal obstruction, due to gallstones, may be noted:—Dr. Charles Bennett (*British Medical Journal*, March 27, 1926, p. 565) has recorded three cases of obstruction of the small intestine from gallstones without mortality. He refers to the discussion on intestinal obstruction at the last annual meeting of the British Medical Association, to show that only 28 out of 3,064 cases of intestinal obstruction were due to this cause. Of the 28 cases no fewer than 14 died. Of his three cases, the first was a woman of 68, where a gallstone was extracted from the ileum 20in. above the ileo-caecal valve. The second was a woman of 68, where a calculus was extracted from the ileum 4in. or 5in. above the valve. The last was a woman of 52, where a gallstone 5½in. in circumference was removed from the ileum. He points out that it is noteworthy how seldom the patients had had earlier symptoms pointing directly to the gall bladder.

Dr. R. S. Coldrey (*British Medical Journal*, May 1, 1926, p. 783) records the case of a woman, aged 66, who had symptoms of partial intestinal obstruction, and finally passed by the rectum a huge gallstone 2in. long and just over 1in. thick.

(8) CASES ILLUSTRATING PYOGENIC INFECTIONS OF THE LIVER.

(*a*) Suppurative Pylephlebitis following Gangrenous Appendicitis.

(Under the care of Dr. Newland, Honorary Surgeon.)

R. W., a male, *aet.* 19, was admitted on the 18th July. On his way home from work two days previously he had been seized with a cramp in the legs, and a "queer" feeling came over him. He managed to reach home, but commenced to vomit on his arrival. This was followed by a severe pain in the right side of his abdomen, which had persisted. He had vomited once on the day previous to his admission. His bowels were usually regular, and he had had no trouble with his water. His previous health had been good.

His temperature on admission was 100.6° F., pulse 98, and respirations 22 per minute. The tongue was coated with a yellowish fur. The lower part of the abdomen was tender and rigid—more pronouncedly so on the right side. *Per rectum* no abnormality could be detected, and the urine was normal. A diagnosis of acute gangrenous appendicitis was made, and an immediate operation performed.

A small quantity of purulent fluid escaped on opening the peritoneal cavity. The appendix was retrocaecal in position and gangrenous throughout its entire length. It contained a stercolith which had partly ulcerated through its wall. The mesoappendix was thickened, and its veins were noted to be thrombosed. The day following the operation his temperature was 102.2° and pulse 100 per minute. The same evening the patient had a rigor, the temperature rising to 104.5°, and he complained of severe generalised abdominal pain. The abdomen was distended, and only a slight amount of drainage had occurred. The white blood count was 7,000 per c.mm. There was no sign of a pelvic collection of pus when he was examined *per rectum*. He was given 1 c.cm. of pituitrin and a turpentine enema with a good result. The next day (20th) another rigor occurred, and there was a slight amount of discharge with a B.C.C. odor from the wound. The tube was removed. On the 22nd, a blood culture was taken, but gave no growth. The white count had risen to 12,000 per c.mm. The sclerotics for the first time were noticed to have a slight yellowish tinge, and on the 23rd the patient was jaundiced. A second blood culture on the 25th was again negative, the wound was discharging freely, the tongue was dry and furred, and the urine contained bile. The patient was evidently going downhill, and rigors occurred on the three following days, the white count still remaining at 12,000 per c.mm. On the 28th inst., under gas and oxygen, the abdomen was opened through a right paramedian incision—the liver was somewhat enlarged, its surface smooth, and the gall bladder contained rather pale bile from which cultures were made. There were no signs of subphrenic abscess. A piece of liver tissue was removed for section, and a cholecystostomy performed. The bile culture produced a pure growth of coliform bacilli, and the liver section showed numerous small foci of polymorph accumulation in the lobules and in Glisson's capsule. On the 30th inst. the patient was intensely jaundiced, and the drainage was 6ozs. Another blood culture was negative. The patient died on the 4th August. Rigors had occurred daily since his operation, and he had been coughing and expectorating yellowish phlegm for the 24 hours previously. The chest was not examined posteriorly owing to the low condition of the patient, but anteriorly fine rales were present over the lower lobe of the left lung.

Autopsy No. 118/27 (*J. B. Cleland*).—The body was intensely jaundiced. The laparotomy wound leading to a suturred area near the liver showed bile-stained necrotic tissue in its walls. On removing

the caecum from its bed a small abscess was found behind the operation area and the open wound in this region. Extending from this into the mesentery, the ileo-colic vein was thrombosed and contained pus. This was traced upwards to the superior mesenteric vein whose commencement was lined by bile-stained pyogenic membrane, occupying about half an inch of the main portion of the vessel, which, however, was clean below. The portal vein was grey in color from purulent contents. The contents of the splenic vein were not purulent. The dome of the liver was adherent to the diaphragm with recent exudate, which on separation showed numbers of small abscesses. The liver weighed 129½ozs. and showed on section numerous purulent foci, especially numerous in the diaphragmatic half of the organ. The abscesses diminished in size as one passed from the diaphragm to disappear in the more distal portion. The abscesses presented a rather rayed appearance; in the younger ones the radii were delicate and lace-like, in the older ones coarser and club-shaped. On opening the portal vein the bile-stained purulent membrane was seen to extend from the commencement of the superior mesenteric vessel up the portal vein, being attached to one side only, leaving most of the intima smooth. The spleen was much enlarged, weighing 16¼ozs., and was dark red and somewhat soft. There was a large irregular chronic ulcer on the anterior wall of the duodenum just beyond the pylorus, measuring half an inch by a quarter of an inch. There was cloudy swelling of the kidneys. A haemorrhagic consolidation of the lower lobe of the left lung was present. Cultures from the spleen gave no growth. A blood plate from the liver showed a pure culture of small colonies of streptococci, developing a greenish zone in 72 hours and corresponding to Streptococcus equinus, group 3.8, in Brown's classification. Sections of the liver show numerous abscesses with bacterial masses in the centres.

Comment.—During the first operation a comment was made that the thrombosed veins in the mesoappendix predisposed to pylephlebitis as a complication which proved to be the case. The question arises whether in these cases of acute appendicitis accompanied by thrombosis of the veins of the mesoappendix it would not be safer to remove the whole of the mesoappendix and if necessary excise the thrombosed veins until normal bleeding occurred.

(*b*) Infected Hydatid Cysts of the Liver.

(*Under the care of Dr. Cavanagh-Mainwaring, Honorary Surgeon.*)

J. C., a male, *aet.* 58, born in Ireland, but had lived in South Australia for many years, was admitted on July 16 complaining of abdominal pain of five days duration. The onset had been sudden, the pain being situated on the right side over the lower ribs and upper part of the abdomen, and radiating to the right shoulder blade. The patient had vomited each day for the past four days, and had been jaundiced. He had complained of a troublesome cough, and expectorated whitish phlegm. Six months ago he had been ill for four days with pain in the upper part of the abdomen. There had been no jaundice. His bowels were constipated, and for the past few days the motions had been very pale.

On examination the temperature was 101.2°, pulse 116, and respirations 22 per minute. The patient was a thin-faced, obviously jaundiced man. The sclerotics were icteric. The tongue was furred. The heart and lungs were normal. The abdomen moved with respiration. A definite mass was palpable in the upper part extending

downwards from the costal margin to the level of the umbilicus. It had a distinct sharp edge, and was smooth and firm. Slight tenderness was present just below the ninth right costochrondral junction. The mass was dull on percussion, the dulness being continuous with the liver dulness which commenced anteriorly at the fifth rib in the right mid-clavicular line. The urine was acid, and contained bile. On July 19th the patient's condition was worse, the jaundice persisting, and the temperature remaining high. A skiagraph showed the presence of an enlargement downwards of the liver, which was diagnosed as an hydatid cyst. The Casoni skin test was positive. On July 27th the temperature was still high, and crepitations were audible at the base of the right lung. He had been expectorating a rusty sputum since admission. On July 30th he complained of pains shooting across the upper part of the stomach and vomited twice. The abdomen did not move with respiration, and the tenderness in the upper quadrant was more pronounced. On July 31st the patient was obviously sinking, and symptoms of general peritonitis were present. He died the same evening.

Autopsy No. 113/27 (*J. B. Cleland*).—There were about 1½ pints of turbid, bile-stained fluid, chiefly bile, with some inflammatory exudate in the peritoneal cavity, especially collecting in the pelvis and round the spleen, where the fluid was almost shut off from the rest of the cavity. The intestines, omentum, &c., were more or less glued together by recent inflammatory exudate. The liver was very large, weighing, with the stomach attached, 112ozs. The enlargement was due chiefly to a huge old hydatid cavity, about 4in. in diameter, in the right lobe, extending to its junction with the left lobe, and reaching to about 1¼in. from the diaphragmatic attachment. The anterior wall of the cyst came to the upper surface over an area of about 4in. in diameter. The hydatid cyst itself was collapsed, gelatinous, and bile-stained. An inflammatory exudate lined the wall. The contents comprised a purulent, foul-smelling fluid. There was great atrophy of the left lobe, which was reduced to a flattened cake 3in. in extent laterally by 4in. by 1in. The rest of the right lobe showed compensatory hypertrophy, distended bile channels, and chronic venous congestion. The lungs were emphysematous and congested. The gall bladder was distended with thick orange-colored bile, with some small bile-stained daughter cysts and a bile pigment calculus, the shape of a clove. There was gelatinous breaking-down hydatid membrane in the cystic duct, which was dilated. The common duct was dilated. Cultures from the degenerated hydatid cyst showed the presence of coliform bacilli, and a number of small colonies of streptococci of the *S. salivarius* group (2.1 of Brown's classification), giving a green zone on blood agar, an acid reaction in lactose and saccharose, and no change in mannite, salicin, inulin, or raffinose.

Comment.—The presence of bile-stained fluid in the peritoneum indicated clearly leakage from the hydatid cyst, with resulting peritonitis.

(*c*) Abscesses of the Liver of Undetermined Origin.

(*Under the care of Dr. Smeaton, Honorary Surgeon*).

J. O'D., a male, *aet.* 54, was admitted on July 31st, with the following history submitted by his medical attendant:—The patient has been ill for eight days, the attack starting with a rigor, and temperature rising to 104°. He commenced to vomit on the following day, but this quickly subsided. He progressed favorably for several days until yesterday, when jaundice appeared, accompanied by air hunger

and a weak, rapid pulse. He had complained of nightly rigors since the onset, but when visited the temperature and pulse had been normal. His previous history had been good, apart from a severe attack of rheumatic fever 20 years ago.

On admission, his temperature was 98.8°, pulse 120, weak and irregular, respirations 28 per minute. He was jaundiced and semi-conscious. The tongue was dry and furred. The heart and lungs were normal. The abdomen was uniformly distended, and moved slightly with respiration. There was some rigidity in the epigastrium. The urine was acid, and contained bile. The patient was given saline and glucose *per rectum*, which was returned with a pale grey motion. He gradually sank, and died six hours after admission.

Autopsy No. 115/27 (*J. B. Cleland*).—The body was deeply jaundiced. On the under side of the left lobe of the liver was an orifice, with ragged, everted, necrotic edges, and about the size of a slate pencil. On its peritoneal aspect an adherent tag of gastro-hepatic omentum was attached, which on separation allowed the escape of a couple of ounces of chocolate-colored pus. The liver, which weighed 8lbs. 2ozs., showed the centre of the left lobe occupied by several large communicating cavities containing foul-smelling, anchovy sauce-looking pus, and with thickened, deeply bile-stained verrucose walls. The dimensions of the cavities were about 3in. from behind forwards, about 4in. laterally, and about 1½in. thick. The right lobe was very large in size, normal in color, but with its substance very soft, and without distended bile ducts. The spleen weighed 10¾ozs., and was enlarged, soft, and dark red. There was some hypostatic congestion of the lungs. The kidneys showed cloudy swelling. There were no other lesions of importance, beyond some hypertrophy and dilatation of the heart. Cultures from the spleen yielded no growth.

9. FAECAL ABSCESS WITH *B. WELCHII* INFECTION SECONDARY TO DIVERTICULOSIS OF THE DESCENDING COLON.

(*Under the care of Dr. Cowan, Honorary Physician.*)

A. M., a female, *aet.* 70, was admitted on April 7th complaining of pains for five days. The pains had come on gradually and were severe enough to make her go to bed. The pain was made worse by movement, and it radiated towards her left leg. She had been subject to bilious attacks and had had one of these the night before the pains started. She had felt feverish when the pains commenced. There had been no vomiting. The bowels were regular with medicine. She said that she got short of breath on exertion and that her feet and ankles swelled after walking. She had had an operation for a lump in the front passage many years ago.

On examination the patient was an elderly obese woman in no distress, with a temperature of 99.6° F., pulse rate 76, and respirations 28. The abdominal walls contained an excess of subcutaneous fat. There was only very slight tenderness in the left loin. No organs or mass could be felt. There was no oedema of the feet. The knee jerks could not be elicited. The reflexes were flexor. The urine contained no abnormalities. For one month after admission the pain in the left side persisted. There was also a temperature ranging between 101° and 99°. Then she developed a painful swollen right leg. Two days later a bruise appeared over the left hip. There was no history of injury, but the area was tender and increased in size. The following day several areas of bruising appeared over the

body and that over the left hip had increased in size. Later in the day her respirations became much embarrassed and the patient died.

Autopsy No. 60/27 (*J. B. Cleland*).—The body was that of an enormously fat woman, weighing about 24 stone. The descending colon was found adherent to a huge faecal abscess cavity occupying the whole of the internal aspect of the iliac bone, destroying the muscle and extending upwards behind the kidney. The size of the cavity was that of about two clenched fists. It contained a quantity of necrotic material, very faecal smelling. Above, this necrotic abscess passed over the iliac crest into the muscles of the loin, the tissues being gangrenous and crepitant. Proximity to the surface had given rise to an extensive discolored patch over the left side of the abdomen, loin, and buttock, on which "blood blisters" had formed, and which yielded blood-stained serum and bubbles of gas. When these areas first appeared they were thought to be purpuric patches. An examination of the descending colon showed a number of small diverticula with some small polypi. One of the diverticula had ruptured to form the abscess cavity, and this had been torn off the wall of the abscess cavity during removal. The liver was pale and soft. A large gallstone was present in a tightly fitting gall bladder. The spleen was rather soft. There was a recent red ante-mortem clot in the right common and external iliac veins. There were no other lesions of importance. Anaerobic cultures were made from the necrotic material. The inoculum heated to 80° C. for 10 minutes gave a pure culture of large gram positive rods, but a very mixed culture when unheated. The large gram positive bacilli gave a typical stormy clot in milk, indicative of *B. Welchii*.

Comment.—The case is interesting as showing how extensive lesions may develop as a result of infection from a faecal diverticulum of the colon and yet there may be little clear evidence of the nature of the condition or its seriousness. In this case the faecal abscess had formed and had extended widely, and had formed a breeding ground for *B. Welchii*, yet the temperature was not very high and there was only slight tenderness in the loin. The symptoms in the leg due to secondary thrombosis of the iliac vessels seemed to attract most attention. A bruise had appeared over the left hip and was thought to be purpuric in nature, whereas it was really due to the proximity of the faecal abscess to the surface, with the gas gangrene accompanying it.

10. RETROPERITONEAL ABSCESS PROBABLY DUE TO INFECTION FROM A LEAKING GALLBLADDER WHICH WAS ADHERENT TO THE DUODENUM.—EXTENSION TO PANCREAS WITH FAT NECROSIS.

(Under the care of Dr. Newland, Honorary Surgeon.)

R. K., a male, *aet.* 59, was admitted on 21st June with the history that he had been seized with a sudden pain just below the navel, followed by vomiting three days previously. The pain was colicy in type, doubling the patient up, and had occurred at intervals, and had lasted about 30 minutes. It was present on admission, but was situated above the navel. The patient had vomited small quantities of yellowish fluid at frequent intervals since the onset. The bowels had been constipated since the attack began; previously they had been quite regular. He had passed flatus. The patient had suffered with flatulent dyspepsia for a number of years. He had had an attack of severe abdominal pain 10 years ago, which had lasted for four days.

On examination the temperature was 102° F., pulse 20, and respirations 32 per minute. The patient was lying quietly in bed. The tongue was thickly coated on the dorsum with a yellowish-brown fur. The conjunctivae had a slight icteric tinge. There were moist sounds at the bases of the lungs with diminished breath sounds. The abdomen was uniformly distended, and moved with respiration. There was a general tenderness on palpation, most severe in the umbilical region. Both recti were slightly rigid. The percussion note was normal. The liver dulness extended from the sixth rib in the midclavicular line to the costal margin. Rectal examination revealed no abnormality. On June 22nd, the temperature was 100° and pulse 110. The bowels had been opened with an enema. He still complained of pain situated more in the upper part of the abdomen. On the 24th June he complained of pain in the left side of the chest rediating down to the stomach; it was severe in character, occurred at hourly intervals, and was accompanied by nausea. The pulmonary condition was unchanged. On June 26th the temperature was still elevated. There were signs of consolidation at both bases. The abdomen was still distended and tender, and the pain persisted. The bowels had acted freely. On June 28th the patient's condition was worse. The tongue was still furred. He had vomited twice, and was troubled with hiccough and was definitely jaundiced. The abdominal tenderness had become located to the right upper quadrant. A cholecystogram reported "indefinite opacities in the right upper abdomen, probably gallstones; none of the opaque salt is seen in the gall bladder—hence probably a pathological condition of the gall bladder or blocking of the bile ducts is present." The blood urea nitrogen was 12mgms. per 100 c.c. of blood. On the 29th June the temperature was 104°. Vomiting had occurred frequently during the night, and the hiccough was practically continuous. An exploratory operation was decided upon. Under ethylene and oxygen the abdomen was opened through a right subcostal incision. When the peritoneum was opened a large inflammatory mass was found beneath the right lobe of the liver in the region of the gallbladder which was apparently involved. The mass was completely shut off from the general peritoneal cavity, but in an endeavor to separate adhesions, pus escaped. A drainage tube was inserted into the abscess cavity, and the abdomen closed *seriatim*. The patient died six days later. He had not rallied after the operation. Vomiting and hiccough had persisted, and he had a definite hypostatic pneumonia. The abscess had been draining satisfactorily.

At the autopsy (No. 98/27) a large retroperitoneal abscess was present below the pancreas, extending to the neighborhood of the gallbladder. This abscess had been opened surgically. It had involved the middle of the pancreas. This portion was eroded below and posteriorly, allowing the escape of pancreatic secretion, which probably had caused a large haemorrhage which completely filled the abscess cavity, and caused many specks of fat necrosis in the abdominal fat. The gallbladder was contracted and contained stones —one large one had partly ulcerated through the wall. There were two fistulous communications between the gallbladder and duodenum. The common duct was dilated, and contained a stone in its lower part.

IV.—OBSTETRICAL AND GYNECOLOGICAL CASES.

1. TETANUS AND TETANUS-LIKE SYMPTOMS ASSOCIATED WITH PREGNANCY.

True tetanus is in some parts of the world a not uncommon complication of the puerperium. As tetanus bacilli are probably occasionally present in the alimentary canal of human beings, it is possible that the entrance to the vagina of the parturient woman may from time to time be contaminated with such tetanus-containing material. The employment of instruments especially in the production of criminal abortion, may lead to the introduction of the tetanus spores into the interior of the uterus with eventually fatal results. Some cases of pregnancy have been associated with atypical symptoms suggesting tetanus. It is possible that these cases were also true tetanus, but it is also possible that they may have a different etiology, one perhaps dependent on the entrance of chorionic elements into the blood stream. The two cases given here in detail comprise:—

(*a*) Probably a true tetanus case, though the tetanus-like organism grown was atoxic; and

(*b*) A case perhaps belonging to the second category mentioned above.

(*a*) Tetanus following Miscarriage.

(*Under the care of Dr. de Crespigny, Honorary Physician.*)

D. W., married woman, *aet.* 27, induced a miscarriage on herself by means of pills and a douche of Castile soap and water on October 7th. The following day she had a shivering attack, a frontal headache, and several times vomited "green bile." During the next two days she felt better, but still had a headache and sore throat. On the morning of October 10th while doing her washing she noticed that her neck was stiff and that her back became "stiff off and on." Soon afterwards her lower jaw began to ache and two hours later she could not open her mouth. Her neck remained stiff and painful and her jaw fixed until she was admitted to the hospital at 11.20 p.m. She had not had any severe attacks of spasms. She had been losing slightly *per vaginam* ever since her miscarriage.

She had two children alive and a third had died at birth. Her only previous illness had been an operation two years ago when her appendix was removed and an ovarian cyst resected.

On admission she was a well-nourished woman, lying on her back in bed with her head slightly retracted and her back arched. On speaking her lower jaw did not move. There was a patch of herpes at the right angle of the mouth. The temperature was 99.2°, pulse 100, and respirations 22. The pupils were equal in size and reacted normally to light and accommodation and there was no strabismus. The masseter muscles were firm and in a state of tonic spasm. There was only very slight voluntary movement of the lower jaw. The whole group of extensor muscles of the neck were in tonic spasm. The back was slightly arched and the patient could not flex it. Nothing abnormal could be detected in the heart, lungs, or abdomen. The reflexes were equal and active on both sides, the plantar reflexes being flexor. The urine contained no abnormal constituents. A lumbar puncture was performed and 8 c.cm. of cerebro-spinal fluid, which was not under pressure, withdrawn. The first 2 c.cm. were slightly turbid, but the remaining 6 c.cm. were limpid and colorless. She was given 10,000 units of antitetanic serum intrathecally and 10,000 units intravenously. The following day there was very little change

in her general condition. She complained of pains in her neck and jaw and had difficulty in swallowing. She had frequent momentary spasms of the spinal extensor muscles, causing her to cry out. The temperature was 102.2°, pulse 76, and respirations 24. The next day another lumbar puncture was performed and 8 c.cm. of bloodstained (?traumatic) cerebro-spinal fluid withdrawn. The fluid was not under pressure. She was given 5,000 units of antitetanic serum intrathecally and 15,000 units subcutaneously. Her general condition remained unchanged, but it was necessary to feed her by means of a stomach tube as she had difficulty in swallowing. She still continued to have momentary spasms, but not any of the severe prolonged type.

On October 14th she seemed worse, her temperature being 102.4°, pulse 112, and respirations 30. There was an external squint of the left eye, but no ptosis. The trismus was less severe than formerly, but the extensor muscles of the neck continued to be in a state of tonic spasm. The momentary spasms continued. There were moist rales at the bases of both lungs. At 7.30 a.m. on October 15th she suddenly became cyanosed, with obvious respiratory difficulty, the accessory muscles acting strongly. There was no stridor, but numerous moist rales over both lungs. She was given continuous oxygen, atropine gr. 1/50, and adrenalin m. vii., and her breathing became almost normal and her color good. The pulse, however, remained weak and rapid. She regained consciousness and attempted to speak. On several occasions she had atypical "spasms" with opisthotonos and flexion of the thighs and knees. After a few seconds she would kick her legs violently as if struggling. At 9 a.m. she suddenly became very cyanosed again and died.

Autopsy No. 160/27.—The liver and lungs were congested. The brain showed no evidence of meningitis. The uterus was enlarged to about the size of a two month's pregnancy. There was no evidence of perforation of its wall. In the fundus was a mass of dark grey necrotic material which could be easily scraped out. A swab was taken from this material and incubated anaerobically in cooked meat medium. Organisms morphologically identical with tetanus bacilli were grown. No evidence of the production of an exotoxin could be obtained, however, by guinea-pig inoculation, for though guinea pig No. 1052 died in three days after injection on October 27th of 0.1 c.cm. of 10 days' old mixed culture after centrifuging, guinea pig No. 1053 inoculated similarly on November 14th lived, the first animal evidently having died from some other infection introduced in the mixed culture.

(*b*) Tetanus-like Symptoms with a Fatal Result during Pregnancy.

(*Under the care of Dr. Ray, Honorary Physician.*)

Elsie P., a woman, *aet.* 28, was admitted, with a provisional diagnosis of meningitis, to the Adelaide Hospital on March 24th, 1926, and died next day.

The patient had been quite well until five days previously, when she got a severe headache and had a "cold." She then became drowsy, but kept on with her work. Two days before admission she cried out that "everything was going black." She had to be supported, but did not faint. On the morning of admission the jaws and neck had become stiff, and had remained so ever since. The headache had disappeared. There had been no trouble with the bowels or urine. She said she had been menstruating for the last five days.

There was no evidence of any abrasions by which tetanus infection might have occurred, except some pimples on the face. The temperature was 98.2°, pulse 78, and the respirations 24. On examination she was a young woman lying on her back in bed with the jaws clenched, the knees drawn up, the face suggesting that she was in pain, and the pupils equal and active. The tongue could not be protruded on account of the clenched jaws. The head was thrown back, and the sterno-mastoids contracted, but there was no opisthotonos. There was no rigidity of the abdomen or legs, and the knee jerks were equal and active. There was no loss of sensation. No fluid could be obtained by lumbar puncture. During the night she had several spasms in which the jaws were clenched, and the breathing was somewhat embarrassed. She was given morphia and atropine, and seemed more comfortable afterwards, but died suddenly at 6 a.m. Fifteen thousand units of anti-tetanic serum had been injected intramuscularly and subcutaneously. The temperature had risen to 102.4° at 4 a.m. on the morning of her death, and the pulse to 120.

At the autopsy (No. 54/26) the ovarian veins were found distended with blood and the uterus somewhat enlarged, slightly soft, and contained a small foetus about half an inch long. There was no evidence of attempts at interference with the pregnancy. The right ovary showed a cystic corpus luteum the size of a large marble. The kidneys were intensely congested, the spleen moderately enlarged and dark in color and of normal texture, and the liver markedly congested. The stomach showed a few small petechial patches. The vessels of the brain were congested, but there was no evidence of meningitis. Cultures from the uterus in cooked meat media showed some large gram positive rods and anaerobic streptococci; similar large gram positive bacilli were grown from the spleen.

Microscopic sections show the superficial layer of the placenta in places necrotic with haemorrhages and degenerated polymorphs. The cystic corpus luteum showed organising tissue with stellate cells in its wall and degenerated lutein cells outside this.

Comment.—Though the symptoms suggested tetanus, the patient clinically was thought not really to be this disease, though anti-tetanic serum was administered. No likely course of entry of tetanus bacilli was detected. Meningitis, another alternative diagnosis, was not present. It was not known until the autopsy was carried out that the patient was pregnant. The supposed occurrence of menstruation for five days was really the evidence of a threatened abortion. She was a married woman, and there seems no indication that she even knew she was pregnant, so that an attempted interference was very unlikely. The association of the uterine bleeding with the occurrence of symptoms would suggest a correlation of the symptoms with the pregnancy. Instead of finding a normal corpus luteum a cystic one was present. This cystic corpus luteum could hardly be the one arising from the present pregnancy with the foetus still so small. Presumably the corpus luteum proper to the present pregnancy had failed to develop, and perhaps instead the older corpus luteum had assumed the necessary activity. It seems possible that the cystic condition of this corpus luteum was responsible for undue aggressiveness of the chorionic epithelium, so that fragments of this were able to enter the circulation and some, after running the gauntlet of the capillaries of the lungs, became arrested in the brain, giving rise to the patient's symptoms. We have heard of other cases, and what perhaps is loosely spoken of as a toxaemia of pregnancy, where the symptoms have also been very suggestive of tetanus.

V.—PATHOLOGICAL LESIONS.

1. TWO CASES OF CONGENITAL POLYCYSTIC KIDNEYS WITH SMALL CYSTS IN THE LIVER.

Case I.

(Under the care of Dr. Cowan, Honorary Physician)

M. P., female, *aet.* 43, was admitted on July 21st, complaining of a bearing-down pain in the lower part of her stomach on micturition. As a child she had been examined by a doctor, who told her she had kidney trouble, which would affect her when she got older. Her general health had remained good until about 12 months ago, when she felt "run down," and began to get the bearing-down pains on micturition. Her bowels were constipated, and taking aperients seemed to make no difference. Sometimes she would go for seven days without having her bowels open, and lately had to have enemata. She had to void her urine every few hours in the day time, and had to get up two or three times each night. Her mouth had been dry for some weeks, and she would vomit all her food when she was constipated. She had had scarlatina when a child, and had had an operation for hernia, and several operations on her nose and throat.

On admission she was a well-nourished woman in no distress. Her temperature was 98°, pulse 72, respirations 16, and blood pressure 140/80. Nothing abnormal was detected in the heart or lungs. The abdomen was protuberant, but there was no tenderness or rigidity. In each loin could be felt a large, irregular, knobby mass which did not move on respiration, and over which the percussion note was dull. The urine was 1015, acid, and contained a fair amount of albumen. After admission the vomiting became more frequent, and she complained of severe headache. Her general condition gradually became worse, and she lapsed into uraemic coma, and died on July 31st.

Autopsy No. 114/27 (*J. B. Cleland*).—The two large polycystic kidneys occupied a considerable portion of the peritoneal cavity, and to some extent displaced the other viscera. The right kidney measured 9½in. x 4½in. x 2½in. (depth), and weighed 31½ozs. The left measured 9in. x 3½in. x 2in., and weighed 27½ozs. The spleen was pushed up against the diaphragm, the left lung being somewhat pressed upon. The liver on its surface showed many small specks and depressions due to cysts, some of them multilocular, in size varying from ones just discernible to the size of a sago grain and up to three-quarters of an inch in diameter. On section a few small cysts were seen. The bladder was distended. The lungs were emphysematous, and congested with oedema of both bases. The heart was normal, except for some slight atheromatous changes in the coronary arteries, and weighed 10½ozs.

Case II.

(Under the care of Dr. de Crespigny, Honorary Physician.)

W. J., male, *aet.* 34, who had been under treatment for pulmonary tuberculosis for about two and a half years, was admitted on June 29th after a severe haemoptysis. He had no urinary symptoms at all and apart from his cough felt quite well. After admission he had another severe haemoptysis, became very breathless and cyanosed, and died four days later. His urine was 1022, acid in reaction, and contained no abnormal constituents.

Autopsy No. 96/27 (*J. B. Cleland*) showed pulmonary tuberculosis with cavitation, caseation, fibrosis, and haemorrhage. The right lung was almost functionless. There were tuberculous ulcers in the intestines. The right auricle was hypertrophied and dilated, there was some hypertrophy of the right ventricle, and the heart weighed 12½ozs.

The kidneys were both large and knobby, with projecting cysts up to 1½in. in diameter. The right was larger than the left. Each weighed 11¾ozs., but the right had lost some fluid. On section there were numerous cysts with clear or greenish turbid contents and smooth walls, leaving a considerable amount of healthy tissue between the cysts. The liver was somewhat congested. On its under surface there were two or three small cysts the size of grains of wheat.

Microscopically the small cysts in the liver were in Glisson's capsule, and were lined by two or three layers of cubical cells, being apparently dilated bile-ducts.

Comment.—The history of Case I. suggests that the kidneys were enlarged and polycystic in childhood. The patient lived, however, till 43 before there was sufficient destruction of kidney tissue to lead to uraemia. There had been no accompanying hypertrophy of the heart, as is found in chronic interstitial nephritis. As so frequently happens, small cysts were present in the liver as well as the large cysts in the kidneys, a coincidence so difficult to explain on developmental grounds. Case II. died of pulmonary tuberculosis without showing any evidence of kidney defect.

(2) Transposition of the Viscera.

(Under the care of Dr. W. Ray, Honorary Physician.).

(By H. H. Wollard, Professor of Anatomy, University of Adelaide.)

E. B., a female, *aet* 58, was admitted on March 15th in a state of collapse, with typical signs of right heart failure and oedema of the lungs. She died before venesection could be performed. It appeared she had been attending the Out-Patient Clinic. She had complained of breathlessness on walking and palpitation of the heart, and had had a blood pressure of 210/140.

Autopsy No. 33/27.—The patient was a very short and very fat woman, 4ft. 11in. high. On opening the abdominal cavity the small intestines, the ascending colon, and caecum were found floating without any attachment at all to the loin until the neighborhood of the under surface of the liver was reached, *i.e.*, the caecum could be swung anywhere in the peritoneal cavity. The appendix was 4½in. long, with a mesentery. Further examination showed that the viscera were transposed, both thoracic and abdominal. The heart weighed 15ozs. The left ventricle was hypertrophied. There was no valvular defect. When the anatomical abnormality was detected, the viscera were left as undisturbed as possible, and Dr. Mead, Demonstrator in Anatomy, kindly undertook a more detailed examination, which unfortunately had to be hurried. The abdominal viscera were preserved, and, after inspecting these specimens, and with reference to Dr. Mead's notes, Professor Wollard has been able to report as follows:—

An investigation of the topography of the viscera revealed the fact that there was present the very rare condition of complete situs inversus viscerum. All the thoracic and abdominal viscera were so transposed that they lay on the left side of the body, forming a mirror image of the normal position on the right, which extended to the minutest details of their anatomy. Thus the caecum and the ascending colon lay on the left side, and the enteric mesentery ended in the left iliac fossa. The duodenum projected forward as a loop in the peritoneum. The liver was normally formed. All the lobes were present in their customary proportions, but arranged from left to right. The quadrate lobe, for instance, is outlined on the left by the fossa for the gall bladder. The gall badder is present, but the cystic duct turns downwards to the right instead of to the left. The structures in the transverse fissure of the liver are arranged in the

usual order from in front backwards, viz., hepatic ducts, the arteries, and then the portal vein. The bile duct, however, lies on the left side of the artery. The spleen, as is usual in these cases, was a multiple organ. In this particular case it consisted of two larger and two smaller elements. One of these smaller spleens lay in contact with a large papillary process of the liver. The foramen of Winslow was directed to the right, and passed into a lesser sac, which extended to the right behind the stomach. This organ lay under cover of the liver to the right side of the vertebral column. The thoracic viscera showed a similar complete transposition. The right pleural cavity was occupied by a two-lobed left lung, and the left by a three-lobed right lung, and all the details of the impressions of adjacent vessels and viscera and the order of the structures in the roots of the lungs were transposed so as to correspond with the reversed positions of the pulmonary organs. The heart was completely transposed, and the apex was situated in the fifth interspace on the right side. Again, all the details of the transposition were repeated in the relations of the pulmonary artery and aorta, in the direction of the arch of the aorta, and the branches arising therefrom. Thus the innominate artery was situated to the left of the common subclavian and common carotid.

Comment.—Cases of complete situs inversus, though rare, have been described in detail from time to time. They are to be distinguished from malposition of the abdominal viscera, arising from faulty rotation during embryological development. The cause of the complete condition has to be sought in those factors of symmetry and polarity, which govern the distribution of cytoplasmic material right at the very beginning of the division of the fertilised ovum. It would seem as if the unfertilised egg was possessed of symmetry in the distribution of the substances that will later form organs, and that the first plane of division, which is usually co-incident with the point of sperm entry, determines the distribution of the organ-forming substances symmetrically about this axis. The irregularities which occur in this distribution account for the minor asymmetry of the body. Experimentally, Spemann and Falkenburg have been able to produce a large number of twins in tadpoles by applying constriction to the egg during segmentation, or in the early blastula stage. In a large number of cases they found that one of the twins (almost invariably the right one) showed situs inversus viscerum. Spemann concludes that the constriction introduces a factor which disturbs the distribution of the material that determines the normal asymmetry of the viscera. This factor acts in the same sense as the innate tendency in the case of the left, and in the opposite sense in the case of the right. Though these experiments cannot be applied directly to the abnormality as seen in man, yet they are extremely suggestive.

VI.—DISEASES OF THE SKIN.

1. EXTENSIVE DERMATITIS, PYREXIA, AND DEATH. ULCERS IN THE JEJUNUM.

(*Under the care of Dr. Makin, Honorary Dermatologist.*)

P. R., male, *aet.* 42, a sailor from a German boat, was admitted to the Skin Department on June 11th complaining of a rash which had started four weeks previously and involved the whole of his body. About two months before admission he had had an abscess in his neck which had been opened and much pus evacuated. He had then been quite well for about eight days, when he began to develop small boils on his arms, and a rash which spread over his body. The rash was very itchy and burning, and kept him awake at night. There was nobody else on board ship who had a rash. His bowels had been regular, and his appetite fair. He denied venereal disease. On admission his temperature was 98° F., pulse rate 100, and respirations 24. With the exception of the rash, there was nothing abnormal detected on general examination. The face showed red raw areas alternating with scabbing and scaly areas. These lesions were present over the whole of the body. There were also red macules and small pinhead pustules scattered over the face, trunk, and limbs. The penis and scrotum were also affected, and inguinal glands enlarged. There was no rash on the head. Nothing abnormal was detected in the urine. Two days after admission the temperature rose to 100° F., but there was nothing on physical examination except the rash to account for this. There was a rise in temperature of 1° per diem for a few days until finally it reached 107°. During the whole of this time the patient was quite rational, and complained of nothing except that he was thirsty and hungry. The rash was treated with a lotion of gr. ii. each of sulphates of copper and zinc to the ounce of water, and for a time seemed to be improving.

Sixteen days after admission ulcers appeared on both corneae, more marked in the right eye. About this time the patient became irrational, and his temperature varied between 100° and 102°. His general condition gradually became worse, and he lapsed into unconsciousness and died on July 6th. Before death pus from one of the pustules was examined, and cultures made from it contained a mixture of *Staphylococcus albus* and *aureus*.

Autopsy No. 99/27 (*J. B. Cleland*).—The whole body was covered with scabs and white scars. There were many scattered subcutaneous abscesses, in some cases covered with scabs. The skin was generally pigmented, and there were large bedsores on the shoulders and buttocks. The skin of the face and thorax was shiny, and almost sclerodermatous. The lungs were slightly emphysematous, with hypostatic pnumonia in both lower lobes, and the upper lobes congested. There was a deep abscess of the neck on the right side below the carotid containing several teaspoonfuls of pus. All the internal organs were slightly congested. In the lower part of the ileum were two small erosions with haemorrhagic bases. Five feet down the jejunum was a transverse ulcer 1in. x ½in. showing heaped up edges and a smooth base. Its serous aspect showed a few elevations like miliary tubercles. Below this ulcer there was a commencing ulcer only a ¼in. long on one of the rugae. An ascaris about 7in. long was found in the intestine. Microscopic sections of the intestinal ulcer showed necrosis on its surface with much plasma and round-celled

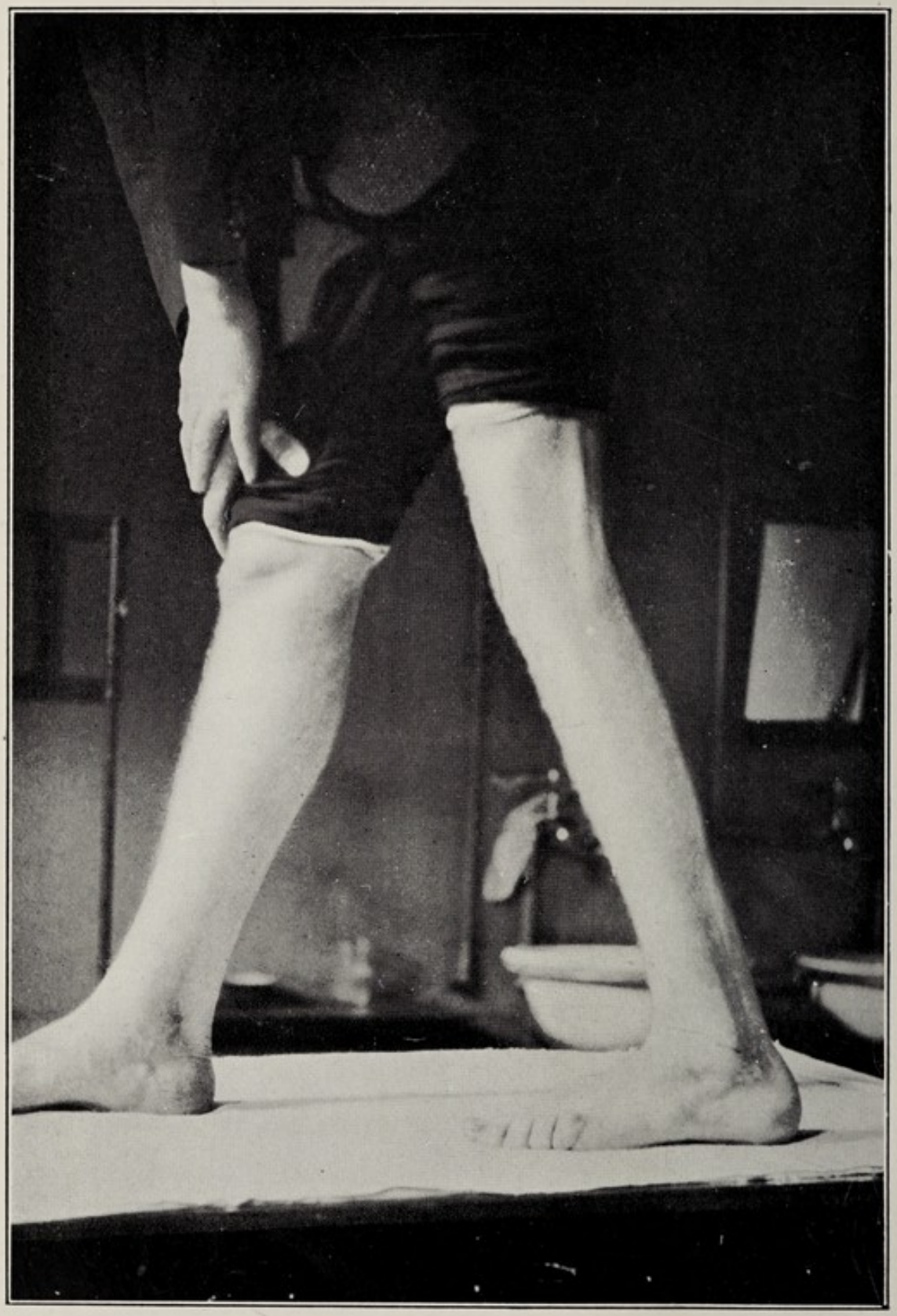

PLATE III.—Contracture of the Calf Muscles due to Sclerodermia.

To face page 57.]

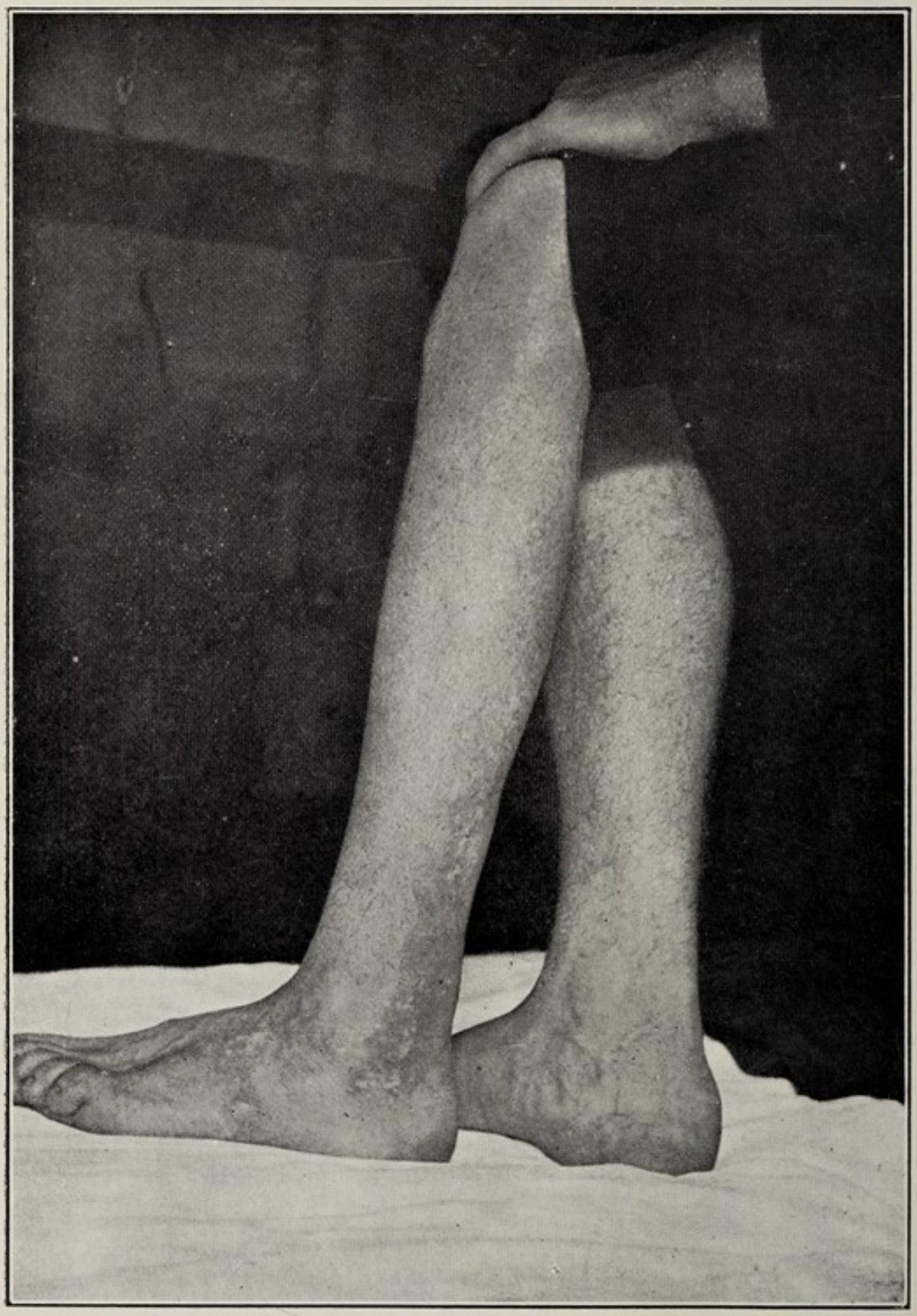

PLATE IV.—Contracture of the Calf Muscles due to Sclerodermia.

To face page 57.]

infiltration, these cells invading the muscular coat. There was a number of swollen cells, probably connective-tissue cells. Sections of a skin lesion showed mostly necrotic tissue with relatively few polymorphs.

2. SCLERODERMIA AS A CAUSE OF CONTRACTURE OF THE CALF MUSCLES.

(Under the care of Dr. de Crespigny, Honorary Physician.)

F. C., male, *aet.* 16, was admitted on 5th November complaining of hardness of the skin of the calf of the left leg for six months. The first thing he had noticed wrong was that he could not put his left heel on the ground. About six months previous to this a horse had trodden on his left foot, but apart from this he had not injured his leg in any way. There was no pain in the leg except when he tried to put his heel on the ground. Except for the hardness of his leg he felt perfectly well.

On examination the left leg was the same length as the right, but it was much thinner, the measurements being:—Right thigh, 19¼in.; left thigh, 17½in.; right calf, 12¾in.; left calf, 10½in. The skin over the left calf was harder than normal, and did not move freely over the underlying fascia, and showed the appearance of leucodermic spots and dilated vessels. The muscles of the calf were hard and contracted, so that flexion of the ankle to a right angle was not possible, and the foot was held in a position of talipes equinus. (Plates III. and IV.) The contracture was due apparently to invasion of the underlying deep fascia covering the gastrocnemius, and so limiting its movements. The muscles of the calf showed no diminution of power. The hardnesss of the skin extended downwards to the outer side of the ankle, and on to the dorsum of the foot. In this region the skin was hard, and could not be moved over the underlying structures. Extension and lateral flexion of the ankle joint were limited. There was no limitation of movement in either the hip or knee joints. Apart from the condition of the left leg, nothing abnormal could be detected on physical examination. Under general anaesthesia a subcutaneous tenotomy of the tendo Achillis was performed, and the foot forced into the position of complete dorsiflexion, and put on a back splint with the foot still in dorsiflexion. Ten days later the splint was removed, and he could then move the ankle quite well and get the foot up to 90° of flexion. The condition of the skin remains unaltered, and the patient still attends for X-ray treatment and massage.

VII.—EPITOME OF THE PATHOLOGICAL LESIONS PRESENT IN ONE THOUSAND POST MORTEMS AT THE ADELAIDE HOSPITAL.

(By J. Burton Cleland, Honorary Pathologist).

In the archives for last year, No. 6 (1926), page 55, we commenced an enumeration of the pathological lesions found at autopsies. In that number data were given for all neoplasms. In the present number we give the pathological lesions met with in diseases of the alimentary system and of the circulatory system in various miscellaneous conditions, such as infectious diseases, disease of the ductless glands, helminthic infections, &c. In the one thousand autopsies carried out between 1920 and 1925 every case in which there was a lesion coming under one of the above categories is set down under that category, with the associated lesions found in the patient. The material thus tabulated should prove of value to those engaged in research work and who require references to the occurrence of particular lesions. This tabulation will be continued in the issue for 1928.

II. Vascular System.

PERICARDITIS.

56/25, M., 68.—Lobar pneumonia. Fractures of three ribs. Pus in pleura opposite them. *Sero-fibrinous pericarditis.*

41/24, F., 60.—*Pneumococcal pericarditis,* pleurisy and peritonitis. Compression of lung.

175/24, M., 31.—Empyema. Lobar pneumonia. *Pneumococcal pericarditis* and peritonitis.

113/20, F., 64.—Lobar pneumonia. *Pericarditis.*

115/22, M., 38.—Lobar pneumonia Collapse. Pleurisy. *Pneumococcal pericarditis.*

71/21, M., 61.—Lobar pneumonia (purulent infiltration). *Purulent pericarditis.*

30/25, M., 75.—Lobar pneumonia. Organisation with large abscess at the base. Pleurisy. *Early purulent pericarditis.*

81/20, M., 24 (Kanaka).—Lobar pneumonia. *Haemorrhagic pericarditis.*

148/24, M., 66.—Meningococcal meningitis and *pneumococcal pericarditis.*

122/22, M., 23.—Empyema. Bronchitis. *Purulent pericarditis.*

178/24, M., 36.—*Acute streptococcal fibrinous pericarditis.* Extensive superficial vesicular eruption.

83/21, F., 33.—Puerperal septicaemia. Vegetations on right side of interventricular septum. *Pericarditis.* Pleurisy with effusion. Infarcts in lung.

199/23, F., 58.—Iodide rash of face. *Acute purulent pericarditis, probably secondary to infection of face.*

31/25, M., 23.—*S. aureus* cellulitis of lip and face: pneumonia, pleurisy, *pericarditis,* and toxaemia.

81/24, M., 47.—Duodenal ulcers (2), one ruptured. Subphrenic abscess. Double empyema. *Purulent pericarditis.*

54/23, M., 43.—Ruptured duodenal ulcer. Peritonitis. Subphrenic abscess. *Secondary purulent pericarditis.*

68/23, M., 53.—Amoebic ulcers of caecum. Tropical abscess of liver. Secondary subphrenic abscess and *purulent pericarditis.* Infarcts in lung.

219/24, M., 48.—*Purulent pericarditis.* Hypertrophied and dilated heart. Chronic venous congestion. Syphilitic aortitis.

58/24, M., 70.—Red, granular contracting kidneys. Hypertrophied and dilated heart. Hypostatic pneumonia. Pleurisy with effusion. *Fibrinous pericarditis.*

120/20, M., 66.—Gangrene of foot. *Pericarditis.* Organising clot in auricular appendix. Atheroma. Arterio-sclerotic kidneys. Degenerated area in occipital lobe. Early erosion of cartilage of knee.

132/22, F., 69.—Hypostatic pneumonia. *Pericarditis.* Duodenal diverticulum.

100/23, F., 63.—Mitral stenosis. *Recent slight pericarditis.* Old Infarcts in lungs. Acute haemorrhagic pancreatitis. Peculiar greenish-grey kidneys. Marked atheroma (? syphilitic).

161/22, F., 62.—*Slight pericarditis.* Infarct of heart wall. Atheroma. Diabetic coma.

76/22, M., 61.—Carcinoma of oesophagus. Empyema. *Pericarditis.* Marked atheroma.

63/23, M., 66.—Interstitial nephritis (kidneys not contracted). Calculus in right pelvis, gravel in left. Hypertrophy of left ventricle. *Simple pericarditis.*

89/21, M., 40.—Granular contracted kidneys (lead). Cardiac hypertrophy. *Slight pericarditis.*

25/25, F., 63.—Empyema of gall bladder, operation, adhesions. Mass with pus adherent to hepatic flexure. *Early pericarditis.* Thrombosis in popliteal veins.

HYDROPERICARDIUM.

67/24, M., 46.—Lobar pneumonia. Silicosis. *Hydropericardium* and pleurisy with effusion.

ADHERENT PERICARDIUM.

187/24, M., 53.—*Adherent pericardium.* Pleuritic adhesions. Slight broncho-pneumonia. Fibrosed patch near hilum of lung. Slight interstitial nephritis. Death—toxaemia and heart failure.

42/24, M., 60.—*Adherent pericardium.* Pleuritic adhesions. Patches of red hepatization. Early organization (?) of base. Hypertrophy of left ventricle. Chronic venous congestion. Some interstitial nephritis.

148/21, F., 27.—Lobar pneumonia. Chronic fibrotic kidneys. *Adherent pericardium.*

112/22, M., 55.—Unresolved pneumonia. *Pericardium* rough from *adhesions.* Hypertrophy of left ventricle. Chronic interstitial nephritis.

124/22, F., 31.—Broncho-pneumonia. *Adherent pericardium.* Contracted kidneys.

72/22, M., 77.—*Adherent pericardium.* Calcified plaque in right auricle. Hypertrophy of prostate with adenomatous polyp. Kidney contracted (?).

141/21, M., 70.—Chronic pulmonary tuberculosis. Emphysema. Terminal broncho-pneumonia. Aortic valves calcified. *Adherent pericardium.*

OTHER LESIONS OF THE PERICARDIUM.

100/21, M., 51.—*Subpericardial haemorrhage extending to around aorta and pulmonary artery (source not detected).* High blood pressure. Slight fibrosis of kidneys.

HYPERTROPHIED HEART WITH INTERSTITIAL NEPHRITIS.

80/30, M., 56.—*Arterio-sclerotic kidneys. Hypertrophy of left ventricle. Oedema of lungs. Nutmeg liver. Hydrothorax.*

87/20, M., 70.—*Hypertrophied and dilated heart. Arterio-sclerotic kidneys. Oedema of lungs.*

124/20, M., 63.—*Hypertrophied heart. Arterio-sclerotic kidneys. Hydrothorax. Arterio-sclerosis.* Sigmoid diverticula.

142/20, M., 48.—*Cardiac hypertrophy and dilatation. Chronic nephritis. Pleuritic effusion.*

56/22, F., 55.—*Chronic nephritis. Cardiac hypertrophy.* Hypostatic pneumonia.

113/22, M., 67.—*Red granular kidneys. Hypertrophy of left ventricle.* Hypostatic pneumonia.

118/22, M., 77.—*Chronic interstitial nephritis with cysts. Hypertrophy of left ventricle and dilatation.*

121/22, M., 64.—*Red granular kidneys. Hypertrophied heart.* Atheroma of aortic valves. *Hydrothorax.*

144/22, M., 43.—*Chronic interstitial nephritis. Heart failure.*

146/22, M., 29.—*Chronic interstitial nephritis. Hypertrophied heart.* Hypostatic pnumonia.

149/22, M., 38.—*Chronic interstitial nephritis (gout). Hypertrophied heart.* Atheroma. Haemorrhage in stomach.

16/23, M., 47.—*Hypertrophied and dilated heart. Chronic venous congestion.* Auricular fibrillation. *Interstitial nephritis, with large reddish firm kidneys.* Pyelitis. Infarcts in lungs.

20/23, M., 63.—*Chronic interstitial nephritis. Hypertrophy of left ventricle.* Infarcts in kidneys and lungs. Thrombus in pulmonary artery. A.m. clot in left ventricle.

34/23, M., 60.—*Chronic interstitial nephritis. Hypertrophy of left ventricle.* Fibrosis of cardiac muscle. Emphysema. Amyotrophic lateral sclerosis (?).

67/23, M., 70.—*Chronic interstitial nephritis. Hypertrophied and failing heart.* Calcified mesenteric glands. Clot in auricular appendix.

96/23, M., 51.—*Chronic interstitial nephritis. Hypertrophied and dilated heart.* Old cerebral haemorrhage. Infarcts in lung.

177/23, M., 82.—*Contracted kidneys. Dilated heart. Hydrothorax.*

58/24, M., 70.—*Red granular contracted kidney, group of cysts in one. Hypertrophied and dilated heart.* Hypostatic pneumonia. Pleurisy with effusion. Fibrinous pericarditis.

94/24, F. —*Advanced interstitial nephritis with arterio-sclerosis. Hypertrophied and dilated heart. Nutmeg liver.* Calcified atheroma in aortic valves. Atheroma of coronaries and Circle of Willis. Gallstone. Coagulation necrosis of patch of gastric mucosa.

5/21, M., 60.—*Advanced chronic kidney disease. Hypertrophied heart.* Atheroma of aorta.

28/21, F., 74.—*Fibrotic kidneys. Hypertrophy of left ventricle.* Myocardial degeneration. Calcified hydatid.

134/23, M., 57.—*Red granular kidneys. Hypertrophied and failed heart. Oedema.* Hypostatic pneumonia. Atheroma.

33/22, M., 42.—Calculus in kidney with atrophy. *Other kidney with chronic nephritis. Hypertrophied heart. Ascites.*

113/23, M., 50.—*Chronic interstitial nephritis. Hypertrophied heart.* Slight silicosis.

17/24, M., 63.—Atheroma of coronaries and vessels at base of brain. *Red granular kidneys. Hypertrophied heart.*

165/24, M., 75.—*Chronic interstitial nephritis. Hypertrophied heart. Heart failure.*

133/24, M., 56.—*Great hypertrophy of left ventricle. Chronic venous congestion. Brown induration of lungs. Some interstitial nephritis.*

147/24, M., 86.—*Cardiac hypertrophy and dilatation. Some interstitial nephritis.* Chronic bronchitis. Slight broncho-pneumonia.

158/24, M., 84.—*Chronic interstitial nephritis. Hypertrophied heart.* Infarction of heart wall. Broncho-pneumonia. (*Death from heart failure* and broncho-pneumonia).

160/24, M., 65.—*Chronic interstitial nephritis. Hypertrophied and dilated heart. Chronic venous congestion.* Slight silicosis and tuberculosis of lungs.

185/24, M., 57.—*Red granular kidneys. Hypertrophy of left ventricle.* Atheroma of aorta. *Oedema of lungs.* Pleuritic adhesions.

107/24, M., 65.—*Hypertophied and dilated heart (heart failure). Large red granular kidneys.* Tuberculosis of right suprarenal. Diabetes.

42/24, M., 60.—Adhesive pericarditis. Patches of red hepatization, early organization at base. *Hypertrophy of left ventricle. Chronic interstitial nephritis. Chronic venous congestion.*

147/23, M., 74.—*Red granular kidneys. Hypertrophied and dilated heart. Chronic venous congestion.* Calculi in bladder. Enlarged prostate.

22/25, M., 54.—*Granular contracted kidneys. Cardiac hypertrophy. Heart failure. Oedema of lungs.* A.M. clot in right auricle and pulmonary artery.

2/25, F., 69.—*Dilated right heart. Chronic venous congestion.* Arterio-sclerosis. Hypostatic pneumonia. *Some interstitial nephritis.* Chronic pancreatitis.

56/20, F., 77.—*Dilatation of heart.* Auricular fibrillation. *Early red granular kidneys.* Nutmeg liver.

97/23, M., about 60.—*Chronic interstitial nephritis. Much cardiac hypertrophy.* Hypostatic pneumonia. Aortitis (? syphilitic).

89/21, M., 40.—*Granular contracted kidneys (lead). Cardiac hypertrophy.* Slight pericarditis.

111/21, F., 67.—*Chronic interstitial nephritis. Cardiac hypertrophy and dilatation.* Mitral thickening. Pleuritic effusion with adhesions.

41/22, F., 57.—Cerebral haemorrhage. *Chronic nephritis. Hypertrophy of left ventricle.*

180/23, M., 50.—Cerebral haemorrhage. *Hypertrophied left ventricle. Red granular kidneys.* Broncho-pneumonia.

64/24, F., 72.—Cerebral haemorrhage. *Cardiac hypertrophy. Some renal fibrosis.* Renal calculi. Gallstone.

175/21, M., 80.—Cerebral haemorrhage (? glioma), tempero-sphenoidal region. Degenerated area in cerebellum. *Interstitial nephritis. Hypertrophied heart.* Caseous mesenteric gland.

93/24, M., 76.—*Red granulated contracted kidneys, arterio-sclerotic. Cardiac hypertrophy.* Lobar pneumonia.

170/24, M., 70.—Lobar pneumonia and empyema. *Hypertrophied and dilated heart. Slight interstitial nephritis.*

50/29, M., 66.—Lobar pneumonia. *Hypertrophied heart. Granular kidneys.* Atheroma.

189/24, M., 77.—Inhalation broncho-pneumonia, following rabbit bone in throat. *Dilatation and hypertrophy of heart. Some interstitial nephritis.*

166/21, M. 66.—Interstitial fibrosis and organisation of lungs (? silicotic or post-influenzal). *Hypertrophy of heart. Arterio-sclerotic kidneys.*

112/22, M. 55.—Carnifying pneumonia. Pericardial adhesions. *Hypertrophy of left ventricle. Chronic interstitial nephritis.*

115/23, M. 59.—*Red granular kidneys* (with acute changes). *Hypertrophied heart.* Unresolved lobar pneumonia and (?) infarcts in lung (? inflammation).

146/23, M. 55.—Partly organised lobar pneumonia near right apex *Red granular kidneys. Hypertrophied and dilated heart.* Early osteo-arthritis of hip.

59/23, M. 67.—Organising pneumonia with (?) gumma. *Hypertrophied heart.* Interstitial nephritis. Atheroma. Old cerebral softening.

85/23, M. 67.—Very large empyema with collapse of lung. *Hypertrophied heart. Chronic interstitial nephritis.*

25/23, F. 15.—Patent foramen ovale. *Chronic parenchymatous and interstitial nephritis. Hypertrophied heart.* Lungs firm.

27/20, M. 67.—*Chronic nephritis. Hypertrophied heart.* Atheroma of coronaries.

131/20, M. 57.—*Cardiac hypertrophy. Contracted kidneys.*

104/21, F. 79.—Thombosis in left ventricle. *Chronic interstitial nephritis.*

144/21, F. 60.—Carcinoma of breast. *Fibrotic kidneys. Left ventricle hypertrophied.* Fatty infiltration and degeneration of heart.

95/24, M. 76.—Large vesical calculus. Hypertrophy of bladder. *Double hydronephrosis. Hypertrophied heart.*

63/20, M. 83.—*Hydronephrosis. Hypertrophied heart.* Malignancy (?) of bladder.

40/23, F. 39.—Peritonitis after appendicitis. Flat gallstone. *Chronic interstitial nephritis. Hypertrophy of left ventricle.*

11/21, F. 65.—*Chronic interstitial nephritis. Slight hypertrophy of left ventricle.*

19/22, M. 57.—*Chronic interstitial nephritis. Hypertrophy of heart.* Syphilitic atheroma. Scar in liver. Syphilitic ulceration of skin.

157/24, F. 48.—*Chronic interstitial nephritis. Hypertrophied heart.* Laparotomy, excisions of gall bladder and of carcinoid tumor of duodenum, secondary fatal haemorrhage from latter. Large degenerated hydatid.

63/23, M. 66.—*Interstitial nephritis (not contracted).* Calculi in righ pelvis, gravel in left. *Hypertrophy of left ventricle.* Simple pericarditis.

181/23, M. 84.—Occlusion of left renal artery and *atrophy of kidney. Cardiac hypertrophy and dilatation.* Calcified aortic value. Marked atheroma. Gangrene of feet. Hypostatic pneumonia.

204/24, M. 75.—Pia-arachnoid haemorrhage from rupture of aneurism of circle. Atheroma of aorta and vessels at base of brain. *Hypertrophied heart and probably moderate interstitial nephritis.*

218/24, M. 69.—Subdural haemorrhage (? rupture of emissary vein). Moderate atheroma of abdominal aorta. *Some hypertrophy of left ventricle. Early red granular kidneys.*

60/21, F. 34.—Aortic valve with two cusps. Subdural haemorrhage from rupture of aneurism of circle. *Hypertrophied heart.* Atheroma of aorta. *Congenital atrophic kidney and chronic nephritis.*

52/21, M., 18.—*Subacute nephritis becoming chronic. Hypertrophy of heart.* Hypostatic pneumonia. Diverticulum of oesophagus.

157/21, M., 76.—Porencephaly. *Hypertrophied left ventricle. Slightly granular kidneys.* Atheroma.

197/23, M., 66.—Marked atheroma. *Large red firm kidneys Hypertrophied and dilated left ventricle.* Infarcts in lungs.

179/23, F., 64.—General peritonitis from rupture of sigmoid diverticulum. *Cardiac hypertrophy. Moderate chronic nephritis.*

HYPERTROPHIED HEARTS, KIDNEY LESIONS APPARENTLY SLIGHT.

211/24, M., 68.—*Hypertrophy and dilatation of left ventricle, not due to valvular or renal disease. Chronic venous congestion.*

214/24, M., 61.—*Hypertrophied and dilated heart (pure hyperpiesis (?) —no valvular or renal disease). Chronic venous congestion. Hydrothorax. Compression of lung.* Old infarct in spleen.

167/24, M., 60.—*Hypertrophied and dilated heart. No increase of blood pressure. Microscopically some interstitial nephritis.* Atheroma.

182/24, M., 63.—*Hypertrophied and dilated left heart, dilated right. Hydrothorax. Compression of lung. Chronic venous congestion. (Cause not ascertained).*

207/24, M., 69.—*Hypertrophy and dilatation of left ventricle. Chronic venous congestion.* Opacity of mitral valve, rupture of chorda and ballooning. *Some (?) chronic interstitial nephritis. (Valvular and renal lesions seem insufficient to account for hypertrophy—(?) hyperpiesis).* Blood urea increased.

220/24, M., 42.—*Cardiac hypertrophy and dilatation not due to valvular or renal disease. Radial thickened, tortuous. Chronic venous congestion of kidneys, spleen.* Fine cirrhosis (?) of liver. Calculus in kidney. Enlarged red glands beside abdominal aorta.

45/22, M., 57.—Cerebral haemorrhage. *Hypertrophy of left ventricle. Scars in kidneys.*

5/24, M., 40.—Cerebral haemorrhage. Syphilitic aortitis (?). *Hypertrophied left ventricle Kidneys normal.*

199/24, F., 65.—Cerebral haemorrhage Atheroma of vessels at base. *Hypertrophy of left ventricle. Little kidney change.*

92/23 —Cerebral haemorrhage. Atheroma of vessels at base. *Hypertrophy of left ventricle. Kidneys nearly normal.*

63/25, M., 55.—Cerebral haemorrhage. *Hyperpiesis. Hypertrophy of left ventricle. Kidneys practically normal.*

156/21, M., 62.—Cerebral haemorrhage. Atheroma. *Hypertrophy of left ventricle.*

64/21, M., 69.—*Arterio-sclerosis. Hypertrophied heart.* Hypostatic pneumonia.

134/20, M., 58.—*Hypertrophied and dilated heart.* Thrombosis in right auricular appendix. Pulmonary infarcts. *Nutmeg liver.*

95/23, F., 33.—*Exophthalmic goitre. Auricular fibrillation—death after quinidine ? why.* Slit-like foramen ovale. Much enlarged spleen? *Hypertrophy and dilation of left ventricle.*

76/24, M., 15 (Chinaman).—*Hypertrophy of heart. Heart failure.*

109/22, M., 56.—*Dilated hypertrophied heart.* Coronary atheroma.

87/23, M., 70.—Diffuse fibrosis of lungs with bronchitis. *Hypertrophy of left ventricle.*

39/20, M., 63.—Pulmonary tuberculosis with collapse. *Hypertrophied heart.*

95/20., M., 79.—*Arterio-solerosis. Hypertrophied heart.* Atheroma of coronaries.

25/22, M., 69.—Carcinoma of prostate, deposits in lungs. Hypertrophied bladder. *Large soft degenerated kidneys with haemorrhages. Hypertrophy of heart.* Atheroma. Suppression of urine.

114/21, M., 60.—Lobar pneumonia. Fatty and slightly *fibrotic kidneys. Arterio-sclerosis.* Slight calcification of aortic and mitral valves.

30/20, M., 78.—Suppression of urine secondary to operation. Haemorrhage. *Hypertrophy of heart.* Atheroma.

64/21, M., 69.—*Arterio-sclerosis. Hypertrophied heart.* Hypostatic pneumonia.

219/24, M., 48.—Purulent pericarditis. *Hypertrophied and dilated heart. Chronic venous congestion.* Syphilitic aortitis.

101/20, M., 56.—Atheroma. *Cardiac hypertrophy.*

HYPERTROPHY OF THE RIGHT HEART.

139/21, M., 56.—Organizing pneumonia (fibrosis). Bronchitis. *Hypertrophy of right ventricle.*

140/21, M., 38.—Marked fibrosis and pigmentation of lung. *Hypertrophy and dilatation of right ventricle.*

32/22, M., 40.—Gumma (?) of lung. *Enormously hypertrophied heart (right) without obvious cause.*

33/23, M., 53.—Intense silicosis (gold miner). Purulent pleurisy. *Hypertrophy of right ventricle.*

RHEUMATIC VALVULAR DISEASE OF THE HEART.

185/23, F., 21.—Bronchiectasis and organisation of lung. *Verrucosities on mitral valve.*

221/24, F., 45.—Thrombosis of internal iliac artery and iliac veins. Pulmonary embolism and infarction. Ball thrombus in left auricle. Small infarcts in spleen. *Old mitral stenosis with recent vegetations.* Placental remains in uterus.

93/21, F., 71.—*Mitral stenosis.* Gallstones. Atheroma of aorta. Retention cyst in kidney. Healed pyloric and duodenal ulcers.

100/23, F., 63.—*Mitral stenosis.* Recent slight pericarditis. Old infarct in lung. Acute haemorrhage pancreatitis. Peculiar greenish-grey kidneys.

178/23, F., 67.—*Some mitral stenosis. Dilated and hypertrophied heart. Venous congestion.*

101/22, M., 61.—*Mitral valve thickened, incompetent. Left ventricle dilated, apex thinned.* Coronaries small.

43/23, F., 30.—*Mitral regurgitation and heart failure.* Clot in right auricular appendix. Infarcts in lungs. *Chronic venous congestion of liver with jaundice.* Peculiar kidneys, with yellowish streaks in cortex.

50/23, M., 57.—*Mitral disease. Heart failure.* Clot in right auricular appendix. White infarcts of lung. Gallstone.

51/22, F., 61.—*Mitral disease. Cardiac hypertrophy.* Collapse of lungs. Cyanotic kidneys, congested liver.

31/23, M., 30.—*Rheumatic mitral stenosis and aortic disease (old and recent).*

36/22, F., 36.—Malignant *mitral* endocarditis. Old *rheumatic lesions.* Pyaemic foci in the thyroid, kidneys, spleen, brain. (See Malignant Endocarditis.)

38/24, F., 21.—Tuberculous peritonitis and caseous glands in mediastinum and abdomen. *Mitral rheumatic endocarditis.*

61/23, M., 22.—Malignant endocarditis (*S. aureus*) of tricuspid and mitral valves *on old rheumatic lesions.* Infarcts of lung and kidney. Large, firm spleen. (See Malignant Endocarditis).

98/20, M., 34.—*Aortic regurgitation with mitral incompetence.*

202/23, M., 49.—*Old rheumatic mitral and aortic endocarditis—subsequent calcification. Chronic venous congestion.* Atheroma of pulmonary artery, with small thrombus. Infarcts in lung. Old infarcts in kidney. Pulmonary tuberculosis (?).

103/24, M., 44.—*Post-rheumatic mitral stenosis with calcification and aortic disease, with calcification.*

205/24, F., 62.—*Old rheumatic mitral and aortic endocarditis.* Breaking down of calcified patch on mitral, with recent vegetations. *Chronic venous congestion.*

130/22, M., 80.—*Aortic stenosis.* Hypostatic pneumonia. Enlarged prostate.

MALIGNANT ENDOCARDITIS.

36/20, M.; 19.—*Extensive tricuspid vegetations.* Defect in interventricular septum. Infarcts in lung. Carnification of lungs. *Large septic spleen.*

158/21, M., 42.—Thrombus in right auricle. *Vegetations on tricuspid valve.* Infarcts in lungs, kidneys.

154/27, M., 14.—Acute infective periostitis (*S. aureus*). *Malignant endocarditis* (*tricuspid*). Pulmonary infarcts and abscesses.

153/24, F., 34.—Very large waxy-looking kidneys—effusion into glomeruli and tubules, oedema, calculi. *Vegetations on tricuspid valve.* White specks in spleen. Broncho-pneumonia, patch (? tub.).

61/23, M., 22.—*Malignant endocarditis* (*S. aureus*) *of tricuspid and mitral valves on old rheumatic lesions.* Infarcts of lung, kidney. *Large firm spleen.* (See Rheumatic Hearts.)

83/21, F., 33.—Puerperal septicaemia. *Vegetations on right of septum.* Pericarditis. Pleurisy with effusion. Infarcts in lung.

4/21, F., 38.—*Recent vegetations on mitral valve. Spleen enlarged.* Old infarcts. Terminal pneumonia. Chronic kidney changes.

36/22, F., 36.—*Malignant mitral endocarditis.* Old rheumatic lesions. *Pyaemic foci in thyroid, kidneys, spleen, brain.*

39/25. F., 19.—*Vegetative endocarditis of left auricle and mitral valve.* Old infarcts in spleen and kidneys. Infective aneurysm of middle cerebral. Extensive cerebral haemorrhage, with subdural clot. Large infective aneurysm in front of aorta.

75/24, M., 23.—*Malignant endocarditis, calcified nodules on mitral valve.* Infarcts in large spleen. Broncho-pneumonia.

81/23, M., 67.—*Malignant endocarditis* (*aortic and mitral*). Polycystic kidneys. Cystitis. Balantis. Atheroma.

141/20, M., 43.—Pneumococcal meningitis. *Malignant aortic endocarditis.* Infarcts in kidneys. Some pneumococcal consolidation, old and recent.

73/22, M., 66.—Pneumococcal meningitis, secondary probably to *large aortic vegetations.* Abscess near coronary artery.

158/22, M., 63.—*Malignant aortic endocarditis.* Infarcts of kidney. Mediastinal abscess. Oedema of lungs.

66/25, M., 45.—*Vegetative endocarditis of aortic valve* on fibrosis and calcification. Infarcts in spleen and kidney. Softening of brain. Atrophied right testis. Emaciation.

186/24, M., 53.—*Malignant endocarditis of aortic valves on calcification* (*stenosis*). *Hypertrophy of left ventricle.* Infarcts in spleen and kidney.

9/21, F., 36.—Streptococcal septicaemia. *Malignant endocarditis.* Infarcts of spleen and kidneys. Hypostatic pneumonia.

74/22, F., 28.—Infection of uterus. Large abscess into sacro-iliac joint. *Slight malignant endocarditis.* Aseptic infarcts in spleen and kidneys. *Streptococci present.*

80/24, M., 30.—*Ulcerative endocarditis.* Broncho-pneumonia.

130/21, F., 29.—Broncho-pneumonia (influenzal ?). Large spleen. Toxic kidneys. *Vegetations on mitral valve.* Pregnancy (eight months).

VALVULAR DISEASE OF THE HEART, NOT DEFINITELY RHEUMATIC OR MALIGNANT.

11/24, F., 75.—*Mitral disease, atheroma. Pleural effusion.* Fibrotic kidneys.

109/24, M., 67.—*Atheromatous nodule (?) in mitral valve. Atheroma of aortic valve.*

207/24, M., 69.—*Hypertrophy and dilatation of left ventricle. Chronic venous congestion. Opacity of mitral valve, rupture of chorda, ballooning of flap.* Some (?) interstitial nephritis. Consolidated firm area in lung. (Hyperpiesis (?), blood urea increased, valvular and renal lesions seem insufficient to account for hypertrophy)

74/20, M., 75.—Cerebral haemorrhage. *Hypertrophy of heart. Calcified band under mitral valve.* Atheroma. Granular contracted kidneys.

46/21, F., 59.—Carcinoma of stomach. Atheroma of aorta. *Thickening of mitral valve.* Infarcts (small) in kidney. Softened area in cortex of brain.

111/21, F., 67.—Chronic interstital nephritis. *Cardiac hypertrophy and dilatation. Mitral thickening. Pleuritic effusion* with adhesions.

104/21, F., 79.—Thrombosis in left ventricle. Infarcts in lung, kidney. Chronic interstitial nephritis. *Mitral thickening.* Atheroma. Tortuous splenic artery.

105/21, M., 82.—Impacted fracture of femur. Pulmonary congestion. Renal fibrosis. *Slight mitral stenosis.*

40/22, M. 62.—Syphilitic aortitis. Aneurysm of aorta. *Small mitral vegetation.* Cerebral softening. Contracted kidneys.

121/22, M. 64.—Red granular kidneys. *Hypertrophied heart. Atheroma of aortic valves. Hydrothorax.*

154/22, M. 53.—*Aortic disease. Cardiac hypertrophy and dilatation.* Cyst in suprarenal.

1/24, M. —.—*Aortic valvular disease. Hypertrophy of left* ventricle. Pulmonary oedema. Right suppurative pyelitis.

146/20, M. —.—*Pea-sized masses attached to two aortic cusps.* Pulmonary fibrosis. Cirrhosis of liver.

110/24, F. 64.—Chronic interstitial nephritis. *Atheroma of aortic valve.*

206/24, M, 65.—*Calcification and fibrosis of aortic valve with stenosis (senile atheroma). Hypertrophy of left ventricle. Chronic venous congestion.* Adhesions round liver, etc.

94/24, F. —.—Insterstitial nephritis. *Hypertrophied and dilated heart. Chronic venous congestion. Calcified atheroma of aortic valve.* Atheroma of coronaries and vessels of circle of Willis. Coagulation necrosis in gastric mucosa.

118/21, M. 70.—Epithelioma of larynx. Broncho-pneumonia. *Calcification of aortic cusps.*

3/21, M. 64.—*Aortic atheroma with dilatation and valvular deficiency. Hypertrophied and dilated heart.*

181/23, M. 84.—Occlusion of left renal artery. Atrophy of kidney. Marked atheroma. Gangrene of feet. Hypostatic pneumonia. *Calcified aortic valve. Cardiac hypertrophy and dilatation.*

23/21, M. 69.—*Aortic disease.* Dilatation of aorta. Atheromatous ulcers. Lobar pneumonia. Chronic interstitial nephritis. Organising pleuritic exudate.

96/21, M. 48.—Empyema. Abscess of liver. Rupture into bronchus. *Partial fusion of aortic cusps.*

141/21, M. 70.—Chronic pulmonary tuberculosis. Emphysema. Terminal broncho-pneumonia. Adherent pericardium. *Aortic valve calcified.*

97/24, F. 68.—Carcinoma of oesophagus. *Small vegetations (? from friction on aortic cusps).*

141/24, M. 68.—Lobar pneumonia. Cerebral softening *Calcification and deformity of mitral and aortic cusps.* Atheroma. Some interstitial nephritis.

114/21, M. 60.—Lobar pneumonia. Fatty and fibrotic (slight) changes in kidneys. Arterio-sclerosis. *Slight calcification in aortic and mitral valves.*

115/21, M. 52.—Enlarged gland in superior mediastinum. Broncho-pneumonia with commencing organisation. *Atheroma of aortic and mitral valves.*

CONGENITAL DEFECTS OF THE HEART.

25/23, F., 15.—Chronic parenchymatous and interstitial nephritis. *Patent foramen ovale.* Lungs firm.

95/23, F., 33.—Exophthalmic goitre. Auricular fibrillation, death after quinidine sulphate. *Slit-like foramen ovale.* Much enlarged spleen. Hypertrophy and dilatation of left ventricle.

36/20, M., 19.—Tricuspid vegetations. *Defect in septum.* Carnification of lungs. Infarcts of lungs. Large septic spleen.

99/23, M., 47.—Deaf and dumb. Subdural haemorrhage (probably not traumatic). Broncho-pneumonia. *Patent ductus arteriosus.* Horseshoe kidney.

89/21, M., 40.—Granular contracted kidneys (lead). Cardiac hypertrophy. *In pulmonary artery opposite ductus arteriosus a projecting knob.* Slight pericarditis.

60/21, F., 24.—*Aortic valve—two cusps.* Subdural haemorrhage from rupture of aneurism. *Hypertrophied heart.* Atheroma of aorta. Congenital atrophic kidney and chronic nephritis.

143/22, M., 31.—*Congenital aortic defect—two cusps, one retroverted. Hypertrophied and dilated heart.*

HEART BLOCK. AURICULAR FIBRILLATION.

30/24, M., 66.—*Heart block with (?) fibrous band at commencement of bundle of His.* Carcinoma of prostate with secondary glands.

16/23, F., 47.—*Hypertrophied and dilated heart. Chronic venous congestion. Auricular fibrillation.* Interstitial nephritis with large red kidneys. Pyelitis. Infarcts in lung, one infected.

56/20, F., 77.—*Dilatation of heart. Auricular fibrillation.* Early red granular kidneys. Nutmeg liver.

95/23, F., 33.—Exophthalmic goitre. *Auricular fibrillation, death after quinidine sulphate* (? why). Slit-like foramen ovale. Much enlarged spleen. *Hypertrophy and dilatation of left ventricle.* Some (?) fibrosis of pancreas.

INFARCTS OF THE HEART.

59/20, M., 70.—*Septic infarct of heart with haemopericardium.* Operation for malignant bladder or prostate. Large vesical calculus. Pyelonephritis.

34/21, M., 42.—*Atheroma of left coronary with degeneration at apex and adherent clot.* Congestion of kidneys.

155/21, F., 70.—*Thrombi in both ventricles, coronary disease, degeneration of heart muscle.* Infarcts of spleen. Thrombosis in popliteal artery. Atrophy of kidney from calculus.

94/22, M., 74.—*Coronary atheroma, degenerated area in left ventricle.* Aortic atheroma. Gangrene of toe. Scarred kidney.

140/22, M., 62.—*Infarct of heart muscle with rupture from coronary disease.*

161/22, F., 62.—Slight pericarditis. *Infarct of heart wall.* Atheroma. Diabetic coma.

159/22, M., 13.—Streptococcal infection over scapula. Pyaemic foci and septic infarcts in lungs. *Septic infarct in heart.*

127/23, M., 64.—Broncho-pneumona. Vegetations on aorta. *Infarct in heart wall and clot.* Cerebral embolism and softening. Polycystic kndneys.

200/23, M., 65.—*Atheroma and thrombosis of branch of coronary. Cardiac thrombi.* Emboli and thrombosis in both middle cerebrals. Renal calculi. Gallstones. Some interstitial nephritis.

152/24, M., 75.—Suicidal cut throat. Some interstitial nephritis. Atheroma of coronaries and vessels at base of brain. *Partial infarction and fibrosis of heart wall.*

149/24, F., 38.—*Infarction of heart wall from coronary atheroma and thrombosis. Hydrothorax and oedema of lungs.*

158/24, M., 84.—Chronic interstitial nephritis. Hypertrophied heart. *Infarction of heart wall.* Broncho-pneumonia. Death from latter and heart failure.

56/24, M., 87.—*Infarction and rupture of heart, coronary atheroma.* Renal and vesical calculi. Some interstitial nephritis.

CLOTS IN HEART (SEE ALSO INFARCTS OF HEART).

37/23, M. 65.—Syphilitic aortitis extending to valve and atheroma. Hypertrophied and dilated heart, &c. *A.m. clot in right auricle.*

183/23, M. 15.—Large superficial ulcer of groin (?) diphtheritic. *A.m. clot in right auricular appendix.*

43/23, F. 30.—Miltral regurgitation and heart failure. *Clot in right auricular appendix.* Infarcts in lung. Chronic venous congestion of liver with jaundice. Very peculiar kidneys with yellowish streaks in cortex.

22/25, M. 54.—Granular contracted kidneys. Hypertrophied heart with failure. *A.m. clot in right auricle and pulmonary artery.*

134/20, M. 58.—Hypertrophied and dilated heart. *Thrombosis in right auricular appendix.* Atheroma. Arteriosclerotic kidneys Degenerated area in occipital lobe. Early erosion of cartilages of knee.

158/21, M. 42.—*Thrombosis in right auricle.* Vegetations on tricuspid valve. Infarcts in lungs and kidneys.

134/21, M. 79.—Hypostatic pneumonia. *Thrombi in right auricular appendix.* Chronic ulcer of scrotum. Haemorrhagic suprarenal. Atheroma.

67/23, M., 70.—Chronic interstitial nephritis. Hypertrophied and failing heart. Calcified mesenteric glands. *Clot in auricular appendix.*

149/21, F. 10.—Diphtheria. *Thrombi in left auricular appendix.* Embolism in middle cerebral. Infarcts in spleen and kidney.

20/23, M. 63.—Chronic interstitial nephritis. Hypertrophy of left ventricle. Infarcts in kidneys and lungs. Thrombosis in pulmonary artery. *A.m. thrombi in left ventricle.*

104/21, F. 79.—*Thrombosis in left ventricle.* Infarcts in lungs and kidneys. Chronic interstitial nephritis. Mitral thickening. Atheroma. Tortuous splenic artery.

138/21, F. 60.—Thrombosis in right ovarian vein. Infarcts of lung. *A.m. thrombi in wall of left ventricle with degeneration of wall.* Caseous tuberculous nodules in lung. Moderate interstitial nephritis.

BALL THROMBI IN HEART.

221/24, F. 45.—Thrombosis of iliac artery and veins. Pulmonary thrombosis and infarction. *Ball thrombus in left auricle.* Small infarcts in spleen. Old mitral stenosis with recent vegetations. Placental remains in uterus.

LESIONS OF THE MYOCARDIUM.

73/20, M. 90.—*Fatty degeneration of heart.* Congestion of lungs. Granular kidneys (cystic).

150/21, F. 59.—Subhepatic abscess. *Fatty degeneration and infiltration of heart.* Chronic interstitial nephritis.

144/21, F. 60.—Fungating carcinoma of breast. Hypertrophied heart. Fibrotic kidneys. *Fatty infiltration and degeneration of heart.*

5/23, F. 49.—Goitre (operation). Cyst in thyroid. *Fatty degeneration of heart.*

59/21, M. 77.—Chronic ulcer of leg. Emphysema. Hypostatic pneumonia. *Fatty infiltration of heart.* Chronic interstitial nephritis with cysts. Angioma of liver.

95/21, M. 61.—Fractured femur. Delirium tremens. Dilatation of stomach. Granular contracted kidneys *Fatty infiltration of heart.*

153/22, M. 75.—Carcinoma of oesophagus. Grangrene of lung. *Fatty infiltration of heart.*

— M. 36.—Fractured ribs. Early arterio-sclerotic kidneys. *Intense fibrosis of myocardium.* Early syphilitic aortitis (?).

156/22, M. 69.—*Fibrotic heart.* Hypostatic pneumonia.

34/23, M., 60.—Chronic interstitial nephritis. Hypertrophy of left ventricle. Emphysema. *Fibrosis of heart muscle.* Amyotrophic lateral sclerosis (?).

129/20, M., 58.—Atheroma. *Dilatation of heart. Degeneration of muscle. Nutmeg liver.*

5/22, M., 34.—Dilated heart. *Degenerated myocardium.*

135/21, M., —.—Emphysema. *Myocardial degeneration.*

28/21, F., 74.—Fibrotic kidneys. Hypertrophy of left ventricle. *Myocardial degeneration.* Calcified hydatid of liver.

108/22, F., 44.—Very fat. Collapse of lungs. *Myocardial degeneration.*

201/23, M., 67.—Syphilitic (?) aortitis. *Stenosis of coronary artery.* Fibrosis of pylorus. Pulmonary oedema.

53/21, M., 75.—Pulmonary tuberculosis. *Atrophied heart. Calcification in columnar carneae.*

78/25, M., 59.—Carcinoma of stomach. Chronic starvation. *Atrophied heart.* Infarct in spleen. Lobar and hypostatic pneumonia. Small area of tuberculosis in lung.

73/22, M., 66.—Pneumococcal meningitis, probably secondary to large aortic vegetations. *Abscess near coronary artery.*

VARIOUS LESIONS OF THE HEART.

62/20, M., 62.—*Heart disease.* Hypostatic pneumonia. Early carcinoma of prostate.

56/20, F., 77.—*Dilatation of heart.* Auricular fibrillation. Early red granular kidneys. Nutmeg liver.

86/20, F., 63.—*Dilated heart. Fluid in pleural cavaties.* Varicocele of broad ligament.

13/21, F., 66.—Peritonitis. Ruptured duodenal ulcer. *Heart disease.*

27/21, M., 37 (negro).—*Atheroma of aorta. Venous congestion of liver.* Hypostatic pneumonia.

155/22, M., 57.—Hypostatic pneumonia. *Heart failure.*

126/20, M., 63.—*Heart failure.* Chronic congestion of stomach. Atheroma. *Nutmeg liver.*

26/25, M., 64.—Fibrosis (slight, (?) silicosis (?) early) of lung. Calcified mesenteric glands. Tubercles on splieen. Hard glands in lesser curvature. *Circulatory failure.*

145/22, M., 39.—*Irregular heart. Quinidine sulphate administered.* Maniacal symptoms.

72/22, M., 77.—Adherent pericardium. *Calcified plaque in right auricle.* Hypertrophy of prostate, with adenomatous polyp. Kidneys (?) contracted.

HIGH BLOOD PRESSURE.

100/21, M., 51.—Subpericardial haemorrhage extending to aorta, etc. (? source). *High blood pressure.* Slight fibrosis of kidneys.

SYPHILITIC CORONARY DISEASE.

38/22, M., 41.—*Syphilitic coronary disease.* Syphilitic meningitis.

SYPHILITIC AORTITIS.

192/23, F., 55.—Red punctate spots in brain (? softening). *Syphilitic aortitis, thickening at bifurcation.* Fibrosis of lungs.

19/22, M., —.—Chronic interstitial nephritis. Hypertrophied heart. *Syphilitic aortitis.* Scar in liver. Syphilitic ulceration of skin.

76/22, M., 61.—Carcinoma of oesophagus. Empyema. Pericarditis. *Marked atheroma (? syphilitic).*

114/23, M., 50.—Organized broncho-pneumonia, bronchitis. *Syphilitic aortitis* (?). Large firm spleen.

16/25, M., 67.—Locomotor ataxy. Charcot's wrist. *Syphilitic aortitis (probably) and atheroma, some dilatation of aorta.* Cystitis, pyelitis, and some renal fibrosis.

5/24, M., 40.—Cerebral haemorrhage. *Syphilitic aortitis* (?). *Hypertrophy of left ventricle.* Kidneys normal.

219/24, M., 80.—Purulent pericarditis. *Hypertrophied and dilated heart. Chronic venous congestion. Syphilitic aortitis.*

897/23, M., about 60.—Chronic interstitial nephritis. Much cardiac hypertrophy. Hypostatic pneumonia. *Aortitis (probably syphilitic).*

201/23, M., 67.—*Syphilitic* (?) *aortitis.* Stenosis of coronary. Fibrosis of pylorus. Pulmonary oedema.

SYPHILITIC AORTITIS AND SYPHILITIC DISEASE OF THE AORTIC VALVES.

82/21, M., 53.—*Aortic valvular isease. Syphilitic aortitis.* Hypostatic pneumonia.

200/21, F., 36.—*Aortitis and periaortitis (probably syphilitic).* Vegetative aortitis. *Syphilitic disease of aortic valve.* Large spleen. Nutmeg liver. Slight pulmonary tuberculosis.

37/23, M., 65.—*Syphilitic aortitis and atheroma. Syphilitic aortic valve. Hypertrophied and dilated left heart. Oedema. Pleural effusion.* A.m. clot in right auricle.

156/23, M., 49.—*Syphilitc aortitis and disease of the aortic valve. Cardiac hypertrophy and dilatation.* Small nodules (specks) in liver.

51/24, M., 70.—*Syphilitic aoritis and atheroma, some dilatation of aorta.* Carcinoma of stomach. Arterio-sclerotic kidneys.

154/22, M., 53.—*Syphilitic aoritis and disease of the aortic valve. Cardiac hypertrophy and dilatation.* Small cyst in suprarenal.

ANEURYSMS (APART FROM CIRCLE OF WILLIS).

138/29, M., 54.—*Aneurysm of ascending aorta. Hypertrophy of heart.* Infarcts in lung.

25/21, M., 52.—*Aneurysm of ascending aorta.* Atheroma of aorta. Collapse of lower part of left lung.

40/21, M., 56.—*Fusiform aneurysm of ascending aorta. Saccular aneurysm at diaphragm.* Pulmonary tuberculosis. Slight interstitial nephritis.

167/21, M., 66.—*Small saccular aneurysm of commencement of aorta.* Pulmonary embolism from thrombosis of both iliac veins.

98/22, M., 62.—*Aneurysm of ascending aorta and arch.* Acute bronchitis. Acute gastritis.

162/22, M., 66.—*Aneurysm of ascending aorta.* Syphilitic (?) pneumonia. Compression of lung and bronchitis.

122/23, M., 49.—*Aneurysm of ascending aorta. Perforation into right pulmonary artery. Syphilitic aoritis (positive Wassermann). Heart failure. Ascites. Hydrothorax. Compression of lungs. Venous congestion of liver.*

123/23, M., 43.—*Aneurysm of ascending aorta and of orifice of right coronary, projecting into sternum and heart (right).*

166/23, M., 58.—*Large aneurysm of ascending aorta and arch eroding sternum Pressure on right bronchus. Dilated, slightly hypertrophied heart. Venous congestion.*

80/21, M., 29.—*Saccular aneurysm of arch and left subclavian. Occlusion of left carotid. Syphilitic aortitis.* Infarct in kidney.

94/21, M., 58.—*Aneurysm of arch of aorta.* Pulmonary congestion, oedema, and some collapse.

187/21, M., 45.—*Aneurysm of arch of aorta. Syphilitic aortitis. Hypertrophy of left ventricle.* Broncho-pneumonia.

149/23, M., 62.—*Aneurysm of arch and descending aorta, thoracic.*

54/24, F., 52.—*Saccular aneurysm of arch eroding into oesophagus.*

74/24, M., 71.—*Aneurysmal dilatation of arch and descending aorta. Hypertrophy of left ventricle. Nutmeg liver, etc.* Wassermann positive.

40/22, M., 62.—*Syphilitic aortitis. Aneurysm at junction of arch and descending aorta.* Small mitral vegetations. Cerebral softening. Contracted kidney.

23/22, M., 55.—*Aneurysm of descending aorta. Rupture into bronchus.*

57/25, M., 66.—*Extreme atheroma of thoracic aorta with probably syphilitic aortitis, incompetence of aortic ring. Two aneurysms, above and below diaphragm.* Hypostatic pneumonia.

35/20, M., 67.—*Abdominal aneurysm.* Empyema, collapse of lung. Granular contracted kidneys.

63/21, M., 48.—*Aneurysm of coeliac axis, rupture into oesophagus.* Turbid fluid in pleural cavities. Adenoma of suprarenal.

183/24, M., 81.—*Atheromatous (non-syphilitic) aneurysm of descending aorta, erosion of vertebrae and ribs, rupture into pleura. Hypertrophied heart.* Chronic interstitial nephritis.

INFECTIVE ANEURYSMS.

39/25, F., 19.—Vegetative endocarditis of left auricle and mitral valve. Old infarcts of spleen, kidneys *Infective aneurysm of middle cerebral.* Extensive cerebral hoemorrhages with subdural clot. *Large infective (?) aneurysm in front of abdominal aorta.*

ATHEROMA.

1/22, M., 80.—Cerebral haemorrhage. Chronic interstitial nephritis. *Atheroma.*

22/22, M., 65.—Softened area in brain. *Atheroma.* Degenerated cavity between liver, kidney, and lung (?) old hydatid.

17/23, F., 73.—Comminuted fracture of femur Senile heart. *Atheroma.* Fibro-fatty liver. Old hydatid of liver.

26/23, M., 67.—Subdural haemorrhage. *Atheroma.* Cerebral softening.

9/22, F., 79.—Degenerated area with haemorrhage near lenticular nucleus. Chronic nephritis. *Marked atheroma.* Empyema of gall bladder and stone.

25/22, M., 69.—Carcinoma of prostate, deposit in lung. Hypertrophy of bladder. Large soft degenerated kidneys with haemorrhage. Hypertrophied heart. *Atheroma.* Suppression of urine.

149/22, M., 38.—Chronic interstitial nephritis (gout). Hypertrophied heart. *Atheroma.* Haemorrhage in stomach.

81/23, M., 67.—Malignant endocarditis (aortic and mitral). Polycystic kidneys. Cystitis. *Atheroma.*

46/23, M., 68—Emphysema. *Marked peripheral atheroma* and clot in popliteal artery leading to gangrene.

31/21, M., 72.—Chronic interstitial nephritis. *Atheroma of aorta.*

27/21, M., 37—(Negro).—*Atheroma of aorta.* Venous congestion of liver. Hypostatic pneumonia.

201/21, M., —Lobar pneumonia. *Marked atheroma.*

25/21, M., 52.—Aneurysm of ascending aorta. *Atheroma of aorta.*

119/21, F., 55.—Haemorrhage into internal capsule and pons. Hypertrophy of left ventricle. *Atheroma of coronaries, aorta,* cerebral vessels.

5/21, M., 60.—Advanced chronic interstitial kidneys. Hypertrophy of heart. *Atheroma of aorta.*

43/21, M., 63.—Ulcerative colitis. *Atheroma of aorta.*

4/23, M., 60.—Cerebral softening. *Atheromatous coronaries.* Renal calculus.

7/23, M., 67.—Chronic interstitial nephritis. *Atheroma of aorta* and cerebral vessels. Cerebral thrombosis and softening.

86/23, M., 79.—Cerebral softening (?) from embolism from atheromatous ulcer. *Atheroma.* Bronchitis and broncho-pneumonia. Fibro-sarcoma of groin.

21/23, M., 68.—Rupture of acute gastric ulcer. *Marked atheroma of abdominal aorta* (? *cause of ulcer*).

134/23, M., 57.—Red granular kidneys. Hypertrophy of heart, heart failure. Oedema and hypostatic pneumonia. *Atheroma.*

109/22, M., 50.—Dilated and hypertrophied heart. *Coronary atheroma.*

119/22, M., 70.—*Emphysema. Marked atheroma of aorta.* Slight interstitial nephritis. Haemorrhage after removal of malignant glands of neck. Cerebral embolism (?) from detached plaque of atheroma.

161/22, F., 62.—Slight pericarditis. Infarct of heart wall. *Atheroma.* Diabetic coma.

58/23, M., 84.—Enlarged prostate. Hypertrophied bladder. Pulmonary abscess. *Atheroma.*

59/23, M., 67.—Organising pneumonia with (?) gumma. Hypertrophied heart. *Intense atheroma.* Interstitial nephritis. Old cerebral softening.

181/23, M., 84.—Occlusion of left renal artery and atrophy of kidney. *Marked atheroma.* Gangrene of feet. Hypostatic pneumonia. Calcified aortic valves, with hypertrophy and dilatation.

197/23, M., 66.—Gangrene of right foot, commencing in left. *Marked atheroma of arch and descending aorta, with pultaceous atheromatous ulcers (probably causing gangrene). Atheroma of coronaries.* Large firm red kidneys. Hypertrophied and dilated left ventricle. Infarcts of lungs.

198/23, M., 79.—Carcinomatous deposits in liver, &c. Red granular contracted kidneys. *Atheroma.*

16/25, M., 67.—Locomotor ataxy. Charcot's wrist. Syphilitic aortitis (probably) and *atheroma.* Some dilatation of aorta. Cystitis, pyelitis. Some renal fibrosis.

30/20, M., 78.—Suppression of urine secondary to operation, haemorrhage. Hypertrophy of heart. *Atheroma.*

122/20, F., 54.—*Rupture of atheromatous ulcer of aorta. Haemorrhage in mediastinum.* Pulmonary embolism.

23/21, M., 69.—Aortic disease. *Dilatation of aorta. Atheromatous ulcers.* Lobar pneumonia. Organisation of pleuritic exudate. Chronic interstitial nephritis.

46/21, F., 59.—Carcinoma of stomach. *Atheroma of aorta.* Thickening of mitral valve. Small infarcts in kidney. Softened area in brain.

60/21, F., 34.—Aortic valve—two cusps. Subdural haemorrhage from rupture of aneurysm of circle of Willis. Hypertrophed heart. *Atheroma of aorta.* Congenital atrophic kidney and chronic nephritis.

162/21, M., 77.—Haemorrhage into lateral ventricle. Arterio-sclerotic kidneys. *Atheroma.* Calcified tracheal gland.

171/21, F., 87.—Bronchitis. *Coronary atheroma.* Slight fibrosis of kidney. Calcified hydatid of liver.

53/25, F., 76.—Cerebral haemorrhage from atheroma. Slight interstitial nephritis. *Atheroma. Atheromatous calcified nodule above aortic valve.* Small ovarian cyst.

57/25, M., 66.—*Extreme atheroma of aorta,* with probably syphilitic aortitis (Wassermann positive). Two saccular aneurisms. Hypostatic pneumonia.

87/22, F., 66.—Contraction of ureter from adhesions, with atrophy of kidney and adenomatous areas. *Atheroma of pulmonary artery, with small clot. Atheroma.* Fractured humerus. Projecting knob of pancreas in duodenum.

94/22, M., 74.—*Coronary atheroma.* Degenerated area in left ventricle. *Aortic atheroma. Gangrene of toes.* Scarred kidneys.

134/21, M., 79.—Hypostatic pneumonia. Thrombi in right auricular appendix. Haemorrhagic suprarenal. Calcified mesenteric gland. *Atheroma of aorta.*

80/22, M., 74.—Gout. Gouty kidneys. Double inguinal hernia. Hydrocele. *Atheroma.*

77/23, M., 75.—*Atheroma—clot on ulcer.* Chronic interstitial nephritis. Purulent cystitis. Stricture of urethra —false passage, stone. Internal haemorrhoids.

100/23, F., 63.—Mitral stenosis. Recent slight pericarditis. Acute haemorrhagic pancreatitis. Peculiar greenish-grey kidneys. *Marked atheroma* (? syphilitic also.)

120/20, M., 66.—Gangrene of foot. Pericarditis. Organising clot in auricular appendix. *Atheroma.* Arterio-sclerotic kidneys. Degenerated area in occipital lobe. Early erosion of cartilage of knee.

126/20, M., 63.—Heart failure. Chronic congestion of stomach. *Atheroma.* Nutmeg liver.

156/21, M., 62.—Cerebral haemorrhage. *Atheroma.* Hypertrophy of left ventricle.

157/21, M., 76.—Porencephaly. Hypertrophy of left ventricle. Slight granular kidneys. *Atheroma.*

93/21, F., 71.—Mitral stenosis. Gallstones. *Atheroma of aorta.* Retention cyst in kidney. Healed pyloric and duodenal ulcers.

99/21, M., 102.—Gangrene of bladder. Peritonitis. Pyetitis (unilateral). *Calcified splenic artery. Atheroma of aorta.* Emphysema.

104/21, F., 79.—Thrombosis in left ventricle. Infarcts in lung and kidney. Chronic interstitial nephritis. Mitral thickening. *Atheroma. Tortuous splenic* artery.

157/23, M., 67.—Gangrene of small intestine from *detachment of thrombus from atheromatous ulcer at commencement of superior mesenteric artery. Thrombus on atheromatous ulcer in common iliac.* Gallstones.

17/24, M., 63.—*Atheroma of coronaries* and vessels at base of brain. Red granular kidneys. Hypertrophied heart.

28/24, M., 71.—Brill's Disease. *Coronary thickening.*

32/24, M., 70.—Haemorrhage into lateral ventricle. *Atheroma of vessels* of brain and *heart.*

33/24, M., 71.—Pia-arachnoid haemorrhage. *Atheroma of vessels* of brain and *heart.*

63/24, M., 78.—Infarcts of both lungs (source?). Pleural effusion. *Atheroma of coronaries.* Some interstitial nephritis.

139/24, F., 66.—Softening of pons. *Coronary atheroma.* Chronic interstitial nephritis.

141/24, M., 68.—Lobar penumonia. Cerebral softening. Calcification and deformity of mitral and aortic cusps. *Atheroma.* Some interstitial nephritis.

57/24, M., 83.—Acute entero-colitis with necrosis. *Atheroma of coronaries, etc.*

167/24, M., 60.—Hypertrophied and dilated heart. No increase of blood pressure. Microscopically some interstitial nephritis. *Atheroma of abdominal aorta* and vessels at base of brain.

185/24, M., 57.—Red granular kidneys. Hypertrophy of heart. *Atheroma of aorta.* Oedema of lungs.

42/20, M., 79.—Necrotic purulent foci round left shoulder. *Atheroma.* Red granular kidneys.

44/20, M., 80.—*Marked atheroma.* Some pneumonic consolidation. Early granular kidneys.

61/20, M., 56.—Diabetic coma. Fibrosis of pancreas. *Atheroma.*

88/20, M., 86.—Gangrene of foot. *Marked atheroma of aorta, etc.* Arterio-sclerosis of kidneys. Distension of gall bladder and ducts with enlarged lymph glands.

27/20, M., 67.—*Atheroma of coronaries.* Interstitial nephritis. Hypertrophied heart.

58/20, M., 68—(Chinaman).—Pulmonary tuberculosis. *Atheroma.*

74/20, M., 75.—Cerebral haemorrhage. Hypertrophied heart. Calcified band in mitral valve. *Atheroma.* Granular contracted kidneys. (?) Fibrotic liver.

57/20, F., 68.—*Atheroma.* Small embolic infarcts in small intestine.

52/20, M., 66.—*Atheroma.* Lobar pneumonia. Hypertrophied heart. Granular kidneys.

95/20, M., 79.—Arterio-sclerosis. Hypertrophied heart. *Atheroma of coronaries.*

101/20, M., 56.—*Atheroma.* Cardiac hypertrophy.

129/20, M., 58.—*Atheroma.* Dilatation of heart, degeneration of muscle. Nutmeg liver.

94/24, F., .—Advanced interstitial nephritis with arterio-sclerosis. Hypertrophy and dilatation of left ventricle, nutmeg liver, &c. Calcified atheroma in aortic valves. *Atheroma of the coronary arteries* and vessels of circle of Willis. Gallstone. Coagulation necrosis of small patch in mucosa of stomach. Death due to heart failure.

113/24, M., 61.—Gallstones with ulceration into peritoneal cavity and haemorrhage. Marked atheroma of cerebral vessels with dilatation of vertebral. *Atheroma of splenic and iliac arteries.* Vegetations on arch of the aorta. Softened patch in brain.

119/24, M., 80.—Enlarged prostate. Hypertrophied bladder. Dilated ureters. Pyonephrosis. Cortical renal cysts. *Atheroma of aorta.* Small growths (?) in liver. Death from uraemia and heart failure.

204/24, M., 75.—Pia-arachnoid haemorrhage from rupture of aneurysm of circle of Willis. Internal hydrocephalus. *Atheroma of aorta* and cerebral vessels. Hypertrophy of heart. Probably moderate interstitial nephritis. Adenoma of kidney. Gallstone.

218/24, M., 69.—Subdural haemorrhage in middle fossa (no trauma, (?) rupture of emissary vein). *Moderate atheroma of abdominal aorta.* Some hypertrophy of left ventricle. Early red granular kidneys. Chronic ulcer of stomach.

ATHEROMA OF THE PULMONARY ARTERY.

202/23, M., 49.—Old rheumatic mitral and aortic endocarditis, subsequent calcification. Chronic venous congestion. *Atheroma of pulmonary artery, with small thrombus.* Infarcts in lung. Old infarcts in kidney. Pulmonary tuberculosis (?).

VEGETATIONS ON THE AORTA.

113/24, M., 61.—Gallstones with ulceration and haemorrhage into peritoneal cavity. Marked atheroma of cerebral vessels. Softened patch in brain. Atheroma of splenic and iliac arteries. *Vegetations on arch of aorta.*

127/23, M., 64.—Broncho-pneumonia. *Vegetations on aorta.* Infarct in heart wall and clot. Cerebral embolism and softening. Polycystic kidneys.

124/23, M., 76.—Coma after catheterisation. Cystitis. *Vegetations on arch of aorta.* Infarct in lung. Infarct (?) in kidney.

200/21, F., 36.—Aortitis and periaortitis, probably syphilitic. *Vegetations on aorta.* Syphilitic disease of aortic valve. Chronic venous congestion. Slight pulmonary tuberculosis.

39/22, M., 10.—Syphilitic ulceration of palate. *Vegetations on aorta.* Broncho-pneumonia, bronchitis, bronchiectasis.

OTHER LESIONS OF AORTA.

71/23, M., 62.—Carcinoma of gall bladder. Biliary obstruction. *Shelf with pocket in arch of aorta (? congenital).*

106/24, M., 67—(Chinaman).—Impacted fracture of femur (1 month). Bedsore. *Linear aortitis with vascularization.*

THROMBOSES (SEE ALSO PUERPERAL LESIONS AND PULMONARY EMBOLISM).

38/25, M., 62.—Squamous epithelioma of pelvis of kidney, recurrent, infiltration to aorta and bladder wall, carcinomatous peritonitis. *Thrombosis of vena cava and common iliacs.*

192/24, M., 65.—Extensive sacral bedsore. Pyelonephritis (? from paralytic distension). *Thrombosis of saphenous vein.* Papillomatous (? malignant) area in stomach.

78/23, F., 70.—Carcinoma of stomach, deposits in liver, small intestine. Cystic ovary. *Clots in popliteal veins.*

150/22, F., 54.—Pulmonary embolism. Varicose veins. *Thrombosis in popliteal vein.*

53/23, F., 69.—Pernicious anaemia. Gallstones. *Thrombosis of popliteal vein.* Bedsores.

100/22, F., 59.—*Thrombosis of popliteal veins.*. Pulmonary embolism.

25/25, F., 63.—Empyema of gall bladder, operation, adhesions, mass with pus round hepatic flexure. Toxic senile heart. Early pericarditis. *Thromboses in popliteal veins extending up.* Perhaps slight pulmonary embolism (nil detected).

155/21, F., 70.—Thromboses in both ventricles. Coronary disease. Degeneration of heart wall. Infarct in spleen. *Thrombi in popliteal artery.* Atrophy of kidney from calculus.

138/21, F., 60.—*Thrombosis in right ovarian vein.* Infarcts in lung. A.m. thrombi in wall of left ventricle with degeneration of wall. Caseous tuberculous nodules in lung. Moderate interstitial nephritis.

84/23, M., 49.—Carcinoma of stomach, permeation of lungs, malignant supraclavicular glands. *Thrombosis of subclavians.* Infarct in lung.

120/23, F. 46.—Carcinomatous glands of neck, mediastinum, &c. (? primary in breast). *Thrombosis of great veins of neck.* Broncho-pneumonia.

13/23, F., 55.—Carnification in both lungs. *Thrombosis in subclavian and axillary vessels.* Some interstitial nephritis.

170/23, F., 58.—Malignant cyst-adenomata of ovaries, involvement of peritoneum. *Adherent clot in pulmonary artery.*

20/23, M., 63.—Chronic interstitial nephritis. Hypertrophy of left ventricle. Infarcts in lungs, kidneys. *Thrombosis in pulmonary artery.* A.m. thrombi in left ventricle.

142/22, M., 82.—Cellulitis of orbit and scalp. Red granular kidneys. Enlarged prostate. *Clot in descending aorta.*

MASSIVE PULMONARY EMBOLISM.

167/21, F., 66.—*Pulmonary embolism from thrombosis of both iliacs, femorals and popliteals.* Small saccular aneurysm *of aorta.*

168/21, F., 23.—Malignant tumour of right suprarenal. *Thrombosis ertending into vena cava. Pulmonary embolism.* Fibrotic ovaries.

100/22, F., 59.—*Thrombosis of popliteal veins. Pulmonary embolism.*

16/22, F., 70.—Cellulitis of calf following ulcers. *Thrombosis of posterior saphenous vein. Pulmonary embolism.* Mucocele of gallbladder with stone.

104/20, F., 63.—*Pulmonary embolism following operation for epithelioma of vulva, failure of wound to heal, fat in wound.*

122/20, F., 54.—Rupture of atheromatous ulcer of aorta. Haemorrhage into mediastinum. *Pulmonary embolism.*

41/21, M., 51.—*Pulmonary embolism following thrombosis of veins of the leg after bullet wound.*

36/21, F., 38.—*Pulmonary embolism following thrombosis in internal iliac vein after removal of Fallopian tube.*

150/22, F., 54.—*Pulmonary embolism.* Varicose veins. *Thrombosis in popliteal.*

20/21, M., 19.—Typhoid fever. *Pulmonary embolism.*

125/21, M., 61.—*Pulmonary embolism from Grawitz tumour of kidney with thrombosis.*

185/21, M., 67.—Cerebral haemorrhage. *Pulmonary embolism.* Infarcts of lung and kidney. Diverticulitis.

109/21, M., 62.—*Thrombosis of popliteal, femoral and external iliac veins. Pulmonary embolism and infarction.* Diverticula of jejunum, &c.

221/24, F., 45.—Miscarriage. Thrombosis of right internal iliac artery and of right iliac veins. *Pulmonary embolism and infarction.* Ball thrombus in left auricle. Small infarcts in spleen. (?) Infarcts in brain. Old mitral stenosis with recent vegetations. Placental remains (?) in uterus.

18/25, F., 21.—Acute appendicitis with gangrenous tip. Stercoliths. *Clot in left pulmonary artery.* Large infarct in lower lobe of left lung. No clots in iliac vein, &c. Pus at wound site. No general peritonitis.

INFARCTS.

15/22, M., 26.—Typhoid fever. Large spleen. *Infarcts in lungs.*

28/23, M., 19.—Typhoid fever, leak at operation suture, peritonitis. Enormously distended ureters. *Infarct in lung.*

79/23, M, 19.—Typhoid fever. Ruptured ulcer. *Infarcts in spleen.*

16/21, F., 24.—Infective cellulitis of face. *Infective infarcts of lungs.* Purulent pleurisy.

61/23, M., 22.—Malignant endocarditis (tricuspid and mitral). Old rheumatic lesions. *Infarcts in lung and spleen.*

107/23, F., 34.—Puerperal sapraemia (anaerobic), disintegration of uterus. Jaundice. *Infarct of lung.*

221/24, F., 45.—Miscarriage. Thrombosis of iliac veins. Pulmonary embolism and *infarcts.* Ball thrombus in left auricle. *Small infarcts in spleen, (?) infarcts in brain.* Old mitral stenosis with recent vegetations.

9/21, F., 36.—Streptococcal septicaemia. Malignant endocarditis. *Infarcts of spleen, kidney.* Hypostatic pneumonia.

83/21, F., 33.—Puerperal septicaemia. Vegetations on right of cardiac septum. Pericarditis. Pleurisy with effusion. *Infarct of lung.*

159/22, M., 13.—Streptococcal infection of scapula. Pyaemic foci and *septic infarcts in lungs. Septic infarct in heart.*

83/21, F., 33.—Puerperal septicaemia. Vegetations on right of inter-ventricular septum. Pericarditis. Pleurisy with effusion. *Infarcts in lung.*

154/23, M., 14.—Acute infective periostitis and epiphysitis ? (*S. aureus*). Malignant endocarditis (tricuspid). *Pulmonary infarcts and abscesses.* Cloudy swelling.

66/25, M., 45.—Vegetative endocarditis on fibrosis, &c., of aortic valve. *Infarcts in spleen and kidney.* Softening of brain. Atrophic retained testis. Emaciation.

39/25, F., 19.—Vegetative endocarditis of left auricle and mitral valve. *Old infarcts in spleen, kidneys.* Infective aneurysm of middle cerebral. Extensive cerebral haemorrhage with subdural clot. Large infective aneurysm in front of abdominal aorta.

36/20, M., 19.—Malignant endocarditis. *Infarcts in lungs.*

134/20, M., 58.—Hypertrophied and dilated heart. Thrombus in right auricular appendix. *Pulmonary infarcts.* Nutmeg liver.

138/20, M., 54.—Cardiac hypertrophy. Aneurysm of first part of aorta. *Infarcts in lungs.*

20/20, F., 66.—Carcinoma of stomach, secondary deposits in liver. *Infarct in lung.*

104/22, M., 55.—Malignant growth of clavicle. *Old infarcts (?) in lung.* Hypostatic pneumonia.

32/23, M., 65.—Purulent bronchitis. *Infarcts in lung.* Pleurisy. Two polyps in colon.

43/23, F., 30.—Miltral regurgitation. Clot in right auricular appendix. *Infarcts in lung.* Chronic venous congestion, &c.

50/23, M., 57.—Mitral disease, heart failure. Clot in right auricular appendix. *White infarcts in lung.* Gallstone.

64/23, F., 18½.—Hydatidiform mole of broad ligament, haemorrhage. *Infarcts in lung.*

84/23, M., 49.—Carcinoma of stomach, permeation of lungs; malignant supraclavicular gland. Thrombosis of subclavian. *Infarct of lung.*

96/23, M., 51.—Chronic interstitial nephritis. Hypertrophied and dilated heart. *Infarcts in lung.* Old cerebral haemorrhage.

104/23, M., 23.—Organising lobar pneumonia, *old infarct* with two abscess cavities. Hypostatic pneumonia of other *lung.* Hypostatic pneumonia.

115/23, M., 59.—Red granular kidneys. Hypertrophied heart. Unresolved lobar (? influenzal) pneumonia and *infarcts* (?)

6/24, F., 49.—*Pulmonary embolism.* Varicose veins in vulva and leg.

48/24, M., 69.—Lymphatic leukaemia. Broncho-pneumonia, with *infarct.*

63/24, M., 78.—*Infarcts of both lungs* (*source not detected*). Pleural effusion. Some interstitial nephritis. Atheroma of coronaries. Old tuberculosis of apices.

122/24, M., 37.—Pneumococcal meningitis. *Infarcts in lung.* Large soft spleen.

160/22, M., 54.—*Infarcts in lung* and thrombi adhesive to wall of pulmonary artery. Carcinoma of stomach. Pancreatic calculi and fibrosis.

124/23, M., 76.—Coma after catheterisation. Cystitis, diverticulum with stone. Vegetations on aorta (transverse). Infarct (?) in kidney. *Infarct in lung.*

16/23, F.. 47.—Hypertrophied and dilated heart. Chronic venous congestion. Auricular fibrillation. Interstitial nephritis, with large red, firm kidneys. Pyelitis. *Infarcts in lung, one infected.*

68/23, M., 53.—Amœbic ulcers of caecum. Abscess of liver. Secondary subphrenic abscess and pericarditis. *Infarcts in lung.*

191/23, M., 11.—Acute purulent tracheitis and bronchitis. *White and red infarcts in lung.* Toxic liver. Toxaemia (?) Red punctate areas in pons.

197/23, M., 66.—Marked aetheroma of aorta. Pultaceous atheromatous ulcers. Large firm red kidneys. Cardiac hypertrophy and dilatation. *Infarcts in lungs.* Gallstones.

18/25, F., 21.—Acute gangrenous appendicitis. Clot in left pulmonary artery. *Infarct in lung.* No clots in iliac veins. Pus at wound site. No general peritonitis.

138/21, F., 60.—Thrombosis of right ovarian vein. *Infarcts of lung.* Caseous tuberculous nodules in lung. A.m. thrombi in wall of left ventricle, with degeneration of wall. Moderate interstitial nephritis.

100/23, F., 63.—Mitral stenosis. Recent slight pericarditis. *Old infarcts in lungs.* Haemorrhagic pancreatitis. Peculiar greenish-grey kidneys. Atheroma (? syphilitic).

185/21, M., 67.—Cerebral haemorrhage. Pulmonary embolism. *Infarcts of lung and kidney.* Diverticulitis.

158/21, F., 42.—Thrombosis in right auricle. Vegetations on tricuspid valve. *Infarcts in lungs, kidneys.*

20/23, M., 63.—Chronic interstitial nephritis. Hypertrophy of left ventricle. *Infarcts in kidneys, lungs.* Thrombosis in pulmonary artery. A.m. thrombi in left ventricle.

104/21, F., 79.—Thrombosis of left ventricle. *Infarcts in lung, kidney.* Chronic interstitial nephritis. Mitral thickening. Atheroma. Tortuous splenic artery.

202/23, M., 49.—Old rheumatic mitral and aortic endocarditis, subsequent calcification. Chronic venous congestion. Atheroma of pulmonary artery with small thrombus. *Infarcts in lungs. Old infarcts in kidney.* Pulmonary tuberculosis (?).

173/23, M., 47.—Intestinal obstruction and resection, peritonitis. Pulmonary tuberculosis. *Infarcts in kidney.* Abscess in epididymus.

46/21, F., 59.—Carcinoma of stomach. Atheroma of aorta. Thickening of mitral valve. *Small infarcts in kidney.* Softened area in cortex of brain.

36/25, F., 24.—Small primary tuberculous foci in lung. *Secondary tuberculous focus, or probably infarct in kidney.* Tuberculous meningitis. Pregnancy. Distended ovarian veins. Distended ureters.

74/22, F., 28.—Infection of uterus, with necrosed patch. Large abscess over iliac bone, &c. Subcutaneous abscesses. Slight malignant endocarditis. *Asceptic infarcts in spleen and kidney.* Toxaemia. Streptococci. Lactating breast.

149/21, F., 10.—Diphtheria. Thrombi in left auricular appendix. Embolism in middle cerebral. *Infarcts in spleen, kidney.*

4/21, F., 38.—Recent vegetations on mitral valve. Spleen enlarged, *old infarcts.* Terminal pneumonia. Chronic kidney changes.

155/21, F., 70.—Thrombosis in both ventricles, degeneration of heart muscle. Coronary disease. *Infarct in spleen.* Atrophy of kidney from calculus. Thrombosis in popliteal artery.

78/25, M., 59.—Carcinoma of stomach. Chronic starvation. Atrophied heart. *Infarct in spleen.* Lobar and hypostatic pneumonia. Small tuberculous focus in lung.

III.—Digestive System.

SUBMAXILLARY ABSCESS.

117/22, M., 48.—Carnified lung after pneumonia. Large white fatty kidneys. *Submaxillary abscess.* Large thyroid. Sigmoid diverticulitis with inflammation.

LESIONS OF THE OESOPHAGUS.

52/21, M., 18.—*Diverticulum of oesophagus.* Subacute nephritis becoming chronic. Hypertrophy of heart. Hypostatic pneumonia.

112/24, F., 26.—Profound anaemia of pregnancy. Ulcer of ileum. *Sloughing oesophageal mucosa.*

38/20, F., 28.—*Congested oesophagus. Stricture* (?) *Exhaustion.*

LESIONS OF THE STOMACH.

95/21, M., 61.—Fractured femur. Delirium tremens. *Dilatation of stomach.* Granular contracted kidneys. Fatty infiltration of heart.

80/25, F., 24.—*Dilated stomach.* Intestinal obstruction from mass of hairpins. Peritonitis. Small umbilical hernia.

150/24, M., 57.—Cerebral haemorrhage, &c. *Fibrotic nodule in wall of stomach.*

25/25, F., 63.—Empyema of gallbladder, &c. *Pedunculated polyp of stomach.*

98/22, M.,62.—Aneurysm of aorta. Acute bronchitis. *Acute gastritis.*

149/22, M., 38.—Chronic interstitial nephritis (Gout). Hypertrophed Heart. Atheroma. *Haemorrhage in stomach mucosa.*

34/24, M., 59.—*Citatricial stenosis near pylorus (?) healed duodenal ulcer—swallowed spirits of salts three months ago.* Broncho-pneumonia. Organising lobar pneumonia. Pulmonary tuberculosis.

201/23, M., 67.—Syphilitic (?) aortitis. Stenosis of coronary vessels. *Fibrosis of pylorus. Pulmonary oedema.*

38/25, F., 63.—Squamous epithelioma of the pelvis of the kidney. Operation—recurrence, &c. *Hypertrophied pylorus.*

42/25, M., 21.—Post-encephalitic Parkinsonian syndrome. Epileptic state. *Tears in mucosa of stomach.* Congestion of viscera.

26/25, M., 64.—Fibrosis (slight, ? early silicosis) of lung. Pulmonary congestion. Calcified mesenteric glands. (?) Tubercles on spleen. *Hard glands on lesser curvature.* Circulatory failure.

ULCERS OF THE STOMACH.

43/20, M., 40.—*Pyloric ulcer.* Subphrenic abscess. Peritonitis. Empyema and collapse of lung.

53/20, M., 72.—*Chronic gastric ulcer.*

93/21, F., 71.—*Healed pyloric* and duodenal *ulcers.* Mitral stenosis. Gallstones. Atheroma.

180/21, M., 58.—*Chronic ulcer of pylorus.*

194/21, M., 59.—*Chronic ulcer of stomach (? malignant).*

83/22, M., 72.—*Chronic ulcer of stomach with abscess in lesser sac. In front of stomach, cavity with malignant deposits in wall.*

92/22, M., 83.—*Gastric ulcer.* Orbital cellulitis (streptococcal).

138/22, M., —.—Peritonitis following *gastrectomy for gastric ulcer.*

21/23, M., 68.—*Acute gastric ulcer of lesser curvature. Rupture into lesser sac.* Marked atheroma of abdominal aorta (? cause of ulcer).

98/23,M., 50.—Cut throat. *Four acute ulcers.* Atrophy of right kidney.

106/23, M., 65.—Paralysis agitans (?) Pulmonary tuberculosis with cavity. Tuberculous ulcers of intestine. *Acute ulcers of stomach.* Gallstones.

138/24, M., 67.—*Two gastric ulcers, one with haemorrhage.* Fatty liver.

218/24, M., 69.—Subdural haemorrhage, (?) rupture of emissary vein. Moderate atheroma of aorta. Some hypertrophy of left ventricle. Early red, granular kidneys. *Chronic ulcer of stomach.*

37/25, F., 37.—*Chronic gastric ulcer. Rupture. Operation.* General peritonitis.

75/25, F., 49.—*Ruptured gastric ulcer, with haemorrhage.*

94/24, F., —.—Advanced interstitial nephritis. Hypertrophied and dilated heart. Venous congestion. Atheroma of aortic valves, coronaries, and Circle of Willis. Gallstones. *Coagulation necrosis in gastric mucosa.*

90/24, M., 31.—Carcinoma on *chronic ulcer.* Deposits in liver and lungs. Fibrosing subcutaneous nodules.

111/24, F., 33.—*Small gastric ulcer, with malignant wall.* Extreme malignant infiltration of lung, like broncho-pneumonia. Deposit (?) in ovary.

ULCERS OF THE DUODENUM.

13/21, F., 66.—*Ruptured duodenal ulcer. Peritonitis.* Heart disease.

78/21, F., 38.—*Ruptured duodenal ulcer. Peritonitis.*

79/21, M., 53.—*Healed duodenal ulcer.* Double lobar pneumonia.

93/21, F., 71.—Mitral stenosis. Distended gall bladder. Atheroma. Retention cyst in kidney. *Healed pyloric and duodenal ulcers.*

3/22, M., 47.—*Duodenal ulcer (operation).* Subphrenic abscess. Pneumonia.

86/22, M., 84.—*Healed duodenal ulcer.* Chronic nephritis.

151/22, M., 28.—*Duodenal ulcers.* Delirium tremens. Fibro-fatty liver.

54/23, M., 43.—*Ruptured duodenal ulcer. Peritonitis.* Subphrenic abscess. Secondary purulent pericarditis.

153/23, M., 76.—*Chronic duodenal ulcer. Death from haemorrhage.*

106/24 (Chinaman), 67.—*Healed duodenal ulcer.* Impacted fracture of femur, bed sore, &c.

81/24, M., 47.—*Duodenal ulcers* (2), *one ruptured.* Subphrenic abscess. Double empyema. Purulent pericarditis.

69/25, M., 68.—Enlarged senile prostate, with small abscess. Atheroma of cerebral vessels. *Two small duodenal ulcers.*

LESIONS OF THE DUODENUM.

51/21, F., 70.—*Diverticulum of duodenum.* Bronchitis. Heart failure.

132/22, F., 69.—Hypostatic pneumonia. Pericarditis. Duodenal diverticulum.

157/24, F., 48.—Cholecystectomy for oval gallstone. *Excision of carcincid growth of duodenum. with fatal haemorrhage.* Fibro-caseous nodules in mesentery, caecal wall, stomach wall. Interstitial nephritis, &c.

87/22, F., 66.—Catheterisation of ureters for adhesions. Atrophied kidney, with adenomatous areas. Atheroma of pulmonary artery and aorta. Fractured humerus. *Projecting knob of pancreatic tissue in duodenum.*

SUBPHRENIC ABSCESS AND COMPLICATIONS.

28/20, F., 48.—*Subphrenic and right retrocolic abscesses.* Tuberculosis of left suprarenal.

43/20, M., 40.—Pyloric ulcer. *Subphrenic abscess.* Peritonitis. Empyema and collapse of lung.

81/24, M., 47.—Duodenal ulcers (2). *Subphrenic abscess.* Double empyema. Purulent pericarditis.

3/22, M., 47.—Duodenal ulcer, operation. *Subphrenic abscess.* Pneumonia.

54/23, M., 43.—Ruptured duodenal ulcer. Peritonitis. *Subphrenic abscess.* Secondary purulent pericarditis.

38/21, M., 65.—Carcinoma of stomach, secondary deposit in liver. Acute cholecystitis. *Subphrenic abscess.*

65/22, F., 65.—*Subphrenic abscess, following cholecystotomy.*

77/22, F., 55.—*Subphrenic abscess after cholecystostomy.* Abscesses in abdominal wall, lungs. Septic broncho-pneumonia. Goitre.

150/21, F., 59.—*Subhepatic abscess.* Fatty degeneration and infiltration of heart. Chronic interstitial nephritis.

68/23, M., 53.—Amoebic ulcers of caecum. Tropical abscess of liver. *Secondary subphrenic abscess* and purulent pericarditis. Infarcts in lungs.

65/25, F., 60.—Hydatid of liver. *Left subphrenic abscess.* Empyema (foul). Collapse of lung. Calculus in right kidney.

LESIONS OF SMALL INTESTINE.

57/20, F., 68.—Atheroma. *Small embolic infarctions in small intestine.*

109/21, M., 62.—*Diverticula of jejunum.* Pulmonary embolism from thrombosis of popliteals. Polypus of sigmoid.

123/21, F., 14 months.—*Gastro-enteritis.* Pharyngeal ulcer. Acute mastoid suppuration.

7/21, F., 50.—*Intense entero-colitis.*

53/24, M., 57.—*Acute enteritis.* Pulmonary congestion. Cardiac failure.

112/24, F., 26.—Profound anaemia of pregnancy. *Peculiar ulceration of ileum.* Sloughing oesophagitis.

43/22, F., 61.—Diffuse peritonitis. *Sloughing ileo-colitis, probably post-operative.*

93/23, M., 69.—Uraemia secondary to enlarged prostate, with pyonephrosis, &c. *Adherent coils of small intestine.*

47/25, M., 38.—Pulmonary tuberculosis. *Polyp of ileum, projecting into lumen and into mesentery.*

108/20, F., 57.—Proliferating ovarian cyst. Thrombosis of inferior mesenteric vessels. *Necrosis of ileum.* Early peritonitis.

157/23, M., 67.—*Gangrene of small intestine from detachment of thrombus in atheroma.*

73/21, F., 38.—Pelvic peritonitis, probably from abortion. *Perforating ulcers of intestine from drainage tube. Necrotic patches in mesentery.*

DIARRHOEA.

27/23, M., 76.—*Diarrhoea.* Chronic parenchymatous and interstitial nephritis (?).

MECKEL'S DIVERTICULUM.

32/25, F., 33.—Tuberculous broncho-pneumonia. Diabetes with small pancreas. *Meckel's Diverticulum.*

130/21, F., 29.—Broncho-pneumonia (?) influenzal. Large spleen. Vegetations on mitral valve. Toxic kidneys. *Meckel's Diverticulum.*

112/23, M., 42.—Carcinoma of stomach. *Meckel's Diverticulum.*

COLITIS AND ULCERATIONS OF COLON.

26/20, M., 73.—*Chronic colitis with polypoid projections.* Early perforation.

54/20, M., 32.—*Ulcerative colitis.*

43/21, M., 63.—*Ulcerative colitis.* Atheroma of aorta.

44/21, M., 54.—*Acute ulcerative colitis.* Hypostatic pneumonia.

107/21, M., 38.—*Extensive ulcerative colitis. Great emaciation. Atrophy of organs.*

74/23, M., 17.—*Chronic ulcers of small and large intestine.* Purpura. Haemolytic streptococci in blood.

78/24, M., 34 (Chinaman).—*Ulcerative colitis (lower ileum and appendix involved).*

112/21, F., 58.—Extensive carcinoma of uterus. Perforation into bladder. *Ruptured ulcer of caecum.*

163/24, M., 50.—*Acute colitis,* congestion and oedema of lungs. Early hypostatic pneumonia.

55/24, M., 81.—*Intense ulcerative entero-colitis.* Fat necrosis in pancreas. Slight interstitial nephritis. Emphysema. Haemorrhages and telangiectases in bladder.

57/24, M., 83.—*Acute entero-colitis, with necrosis.* Atheroma of coronaries, &c.

68/23, M., 53.—*Amoebic dysenteric ulceration of the caecum.* Tropical abscess of the liver, &c., with subphrenic abscess and pericarditis. Infarcts in the lungs.

190/24, F., 23.—Bilateral malignant adenomata of suprarenals, with deposits. *Dysenteric ulceration of the ileum and colon.*

13/24, M., 77.—*Dysenteric ulceration of colon.* Fibrotic kidneys.

79/25, F., 55.—*Extensive dysenteric ulceration.* Fatty liver.

COLON.

131/21, F., 46.—Mental depression. Collapse of a lobe of the lung. *Hard faeces in colon.* Acidosis.

32/23, M., 65.—Purulent bronchitis. Infarct in lung. Pleurisy. *Two polypi in colon.*

124/20, M., 63.—Hypertrophied heart. Arterior-sclerotic kidneys. Hydrothorax. *Sigmoid diverticula.*

179/23, F., 64.—General peritonitis after *rupture of sigmoid diverticulum.* Cardiac hypertrophy. Moderate chronic nephritis.

185/21, M., 67.—Cerebral haemorrhage. Pulmonary embolism. Infarcts in lungs, kidney. *Diverticulitis.*

117/22, M., 48.—Carnified lung after pneumonia. Large white fatty kidneys. Submaxillary abscess. Large thryoid. *Sigmoid diverticula* (2), *with inflammation.*

INTESTINAL OBSTRUCTION, ETC.

173/23, M., 47.—*Intestinal obstruction and resection.* Peritonitis. Pulmonary tuberculosis. Infarcts in kidney. Abscess in epididymus.

122/21, F., 56.—*Strangulation of hernia.*

72/22, M., 53.—*Strangulation of inguinal hernia.* Oxyuris.

146/21, M., 32.—Lobar pneumonia and pleurisy. *Partial chronic intestinal obstruction from inguinal hernia.*

85/22, F., 85.—*Strangulation of femoral hernia.* Acute bronchitis and hypostatic pneumonia.

49/23, M., 50.—*Strangulation of femoral hernia. Atony of gut.*

80/25, F., 24.—Dilated stomach. *Intestinal obstruction from mass of hairpins.* Peritonitis. Small umbilical hernia.

85/20, F., 83.—*Impacted gall stone. Slight ulceration of intestine, high above the obstruction.* Gall bladder adherent to duodenum. Pocket in duodenum. Small stone in common duct.

2/21, M., 83.—Diabetes. Enlarged prostate. Genito-urinary infection. Vesical calculus. *Old volvulus of sigmoid with partial obstruction.*

152/21, F., 42.—*Intestinal obstruction from volvulus of small intestine. Operation. Plastic peritonitis with adhesions and obstruction.*

84/20, M., 50.—Many years in asylum. *Volvulus of sigmoid (enormous distension).* Thinning of parietal bones, protuberance of occipital. Distension of lateral ventricles.

47/21, M., 34.—*Twisting of caecum and ascending colon on a long mesentary under small intestine and its mesentery, intestinal obstruction, secondary ulcers in caecum and ascending colon.*

108/24, M., 50.—*Operation for intestinal obstruction from adherent Meckel's diverticulum. Paralytic ileus with oedema. and congestion. Sticky peritonitis.* Organisation of anterior tongue of left lung.

PERITONITIS.

175/24, M., 31.—Empyema. Lobar pneumonia. Pericarditis. *Peritonitis (pneumococcal).*

175/24, M., 31.—Empyema. Lobar pneumonia. *Pneumococcal* pericarditis and *peritonitis.*

54/23, M., 43.—*Ruptured duodenal ulcer. Peritonitis.* Subphrenic abscess. Secondary purulent pericarditis.

13/21 F., 66.—*Peritonitis. Ruptured duodenal ulcer.* Heart disease.

78/21, F., 38.—*Ruptured duodenal ulcer. Peritonitis.*

102/21, M., 59.—Extensive carcinomatous ulcer of stomach. Abscess of liver adjacent. *Peritonitis.* Pus over left wrist.

184/23, M., 56.—*General peritonitis after colectomy* for carcinoma and appendicostomy.

207/23, F., 47.—Colostomy and removal of (?) malignant mass in sigmoid. *Leakage. Peritonitis.*

43/22, F., 61.—*Diffuse peritonitis. Sloughing ileo-colitis, probably post-operative.*

179/23, F., 64.—*General peritonitis after rupture of sigmoid diverticulum.* Cardiac hypertrophy. Moderate interstitial nephritis.

85/21, F., 6.—*Gangrenous appendix. General peritonitis.* Bronchopneumonia.

40/23, F., 39.—*Peritonitis with pus collections after appendicitis.* Flat gallstone. Chronic interstitial nephritis. Hypertrophy of left ventricle.

18/25, F., 21.—*Acute appendicitis with gangrenous tip.* Stercolites Clot in left pulmonary artery. Infarct in lung.

41/23, F., 46.—*Purulent peritonitis* with double pleurisy and empyema. Pyonephrosis with stone and perinephritis. (*? cause of peritonitis.*)

177/24, M., 20.—Drained empyema. Compressed lung with organisation. Haemorrhagic speckling of lungs. *Peritonitis.* Enlarged spleen.

129/23, M., 20.—Purulent infiltration of bladder wall. Cellulitis. *Peritonitis.*

99/21, M., 102.—Gangrene of bladder. *Peritonitis.* Pyelitis (unilateral). Atheroma. Calcification of splenic artery. Emphysema.

203/24, F., 14.—*General peritonitis, secondary to operation for* tuberculous salpingitis with adhesions to rectum.

12/21, F., 41.—Left pyosalpingitis and abscess behind uterus. *General peritonitis.*

19/23, F., 36.—*Peritonitis after vaginal hysterectomy* for cancer of cervix. *Ileus.*

187/23, F., 63.—*Operation for infected ovarian cyst. Secondary peritonitis* and pleurisy.

141/22, F., 60.—*Septic peritonitis.* Degenerated area in uterus.

6/23, F., 25.—*Purulent peritonitis.* Necrotic area near internal os of uterus.

117/23, F., 22.—Puerperal septicaemia after miscarriage. Recto-vaginal fistula. *Peritonitis.* Caseous bronchial glands.

97/21, F., 21.—Necrotic and septic fundus uteri. *General peritonitis.* Cloudy swelling.

72/25, F., 26.—Septic metritis. Perforation of uterus. *General peritonitis.*

191/21, F., 28.—*Caesarean section. Peritonitis. Failure of wounds in uterus and abdominal wall to unite.*

96/22, M., 27.—*Purulent peritonitis—source?*

203/23, M., 42.—*Chronic adhesive peritonitis.* Chronic interstitial nephritis. Abscess of lung and some tuberculosis.

92/21, F., 23.—Blood in pelvic cavity. Operation. *General peritonitis.* Jaundice. Yellowish liver.

51/20, M., 58.—*General peritonitis.* Calcified hydatid of liver.

176/23, F., 37.—(Partial examination.) *General peritonitis.*

APPENDIX. (SEE ALSO UNDER PERITONITIS.)

194/24, M., 22.—Cyst in optic thalamus, &c. *Gangrenous appendix with abscess walled off.*

85/21, F., 6.—*Gangrenous appendix. General peritonitis.* Bronchopneumonia.

37/22, —, —.—*Intraperitoneal haemorrhage after appendicectomy.* Pelvic abscess.

PERITONEAL LESIONS.

87/24, M., 70.—Pulmonary tuberculosis (extensive). Inspissated empyema. *Tumor-like congeries of distended veins in transverse mesocolon, coronary veins of stomach, posterior abdominal wall, over bladder, etc.*

109/21, M., 62.—Thrombosis of popliteal vessels, &c. Pulmonary embolism. Diverticulum of jejunum. Polyp of sigmoid. *Lipomata in mesentery.*

68/20, M., 46.—Diabetes. *Dilated lacteals in small intestine with fibrosed mesenteric glands.*

108/20, F., 57.—Proliferating ovarian cyst. *Thrombosis of inferior mesenteric vessels.* Necrosis of ileum. Early peritonitis.

92/21, F., 21.—*Blood in pelvic cavity.* Operation. General peritonitis. Jaundice. Yellowish liver.

174/21, M., 52.—Diffuse epitheliomatous infiltration of neck and thorax. *Mulberry warty condition of peritoneum over left kidney.*

FISTULA IN ANO. ISCHIO-RECTAL ABSCESS.

28/22, M., 55.—*Death under chloroform. Fistula in ano. Ischio-rectal abscess.* Some emphysema, &c.

HAEMORRHOIDS.

77/23, M., 75.—Atheroma with clot on ulcer. Chronic intestitial nephritis. Purulent cystitis. Stricture of urethra. *Internal haemorrhoids.*

HERNIA (STRANGULATED—SEE INTESTINAL OBSTRUCTION).

56/21, F., 48.—Gummatous meningitis. Vast bed sores. Acute pyelonephrosis. Double hydrosalpinx. *Ventral hernia (fat).*

80/25, F., 24.—Dilated stomach. Intestinal obstruction from mass of hairpins. Peritonitis. *Small umbilical hernia.*

65/21, M., 54.—*Operation for double hernia. Intra and retro-peritoneal haemorrhage.* Dilatation of stomach and bowel. Emphysema. Hypostatic pneumonia.

55/21, M., 38.—*Intraperitoneal haemorrhage after inguinal hernia operation.* Fatty liver. Fused horseshoe kidney.

80/22, M., 74.—Gout. Gouty kidneys. *Double inguinal hernia.* Hydrocele. Atheroma.

RECTUM.

120/20, M., 66.—Gangrene of foot. Pericarditis. Organising clot in auricular appendix. Arterio-sclerotic kidneys. Degenerated area in occipital lobe. *Large faecal balls in rectum.*

LIVER CONDITIONS.

(Not secondary to Carcinoma of Stomach.)

125/20, M., 42.—*Cirrhosis of liver (atrophic). Large spleen.*

136/20, F., 63.—*Cirrhosis of liver. Intestinal haemorrhage.*

146/20, M., —.—Endocarditis. Pulmonary fibrosis. *Cirrhosis of liver.*

131/23, M., 56.—*Cirrhosis (hobnail). Haemorrhage from oesophageal vein.*

202/24, M., 40.—Fracture of skull, &c. *Hobnail cirrhosis of liver.*

70/25, M., 58.—*Cirrhosis of liver (fine, multilobular). Ascites.* Chronic venous congestion of spleen. Hypostatic pneumonia.

125/24, F., 55.—*Unilobular cirrhosis of liver. Jaundice.* Fatty infiltration of heart.

69/20, M., 57.—Cirrhosis of pancreas. *Biliary obstruction and cirrhosis of liver.*

65/20, M., 42.—Chronic pancreatitis. Fat necrosis. *Fibrotic liver.*

220/24, M., 42.—*Fine cirrhosis of liver.* Cardiac hypertrophy and dilatation without valvular defects or renal disease. Chronic venous congestion. Enlarged red glands beside abdominal aorta. Small cortical calculus in one kidney, other hypertrophied.

62/24, F., 70.—Carcinoma of bladder and hydronephrosis. *Some hepatic cirrhosis.*

60/23, M., 73.—Acute traumatic arthritis of knee. Toxic myocarditis. *Slight fibrosis of liver.* Chronic interstitial nephritis. Subdural haemorrhage.

1/21, M., 44.—*Syphilitic cirrhosis of liver.*

1/23, M., 34.—*Syphilitic* (?) *cirrhosis.* Infarct-like areas in lung. Purulent bronchiolitis. *Large firm spleen.* Syphilitic softening of frontal lobe. (Wassermann positive.)

52/23, M, 39.—*Syphilitic cirrhosis. Marked collateral circulation.* Gallstones. Peculiar suprarenals.

28/22, M., 55.—Death under $CHCL_3$. Fistula in ano., &c. Scarred irregular area at apex of kidney. (?) *Gumma of liver.*

85/24, M., 66.—*Ascites. Perihepatitis and perisplenitis with fine cirrhosis (Hale-White type).* Empyema with collapsed lung.

13/25, M., 48.—Lobar pneumonia (alocholic patient). Cholelithiasis. *Cholecystitis. Perihepatitis.*

151/22, M., 28.—Delirium tremens. Heart failure. *Large fibro-fatty liver.* Duodenal ulcers.

19/21, F., 47.—*Carcinomatous cirrhosis.*

22/23, M., 34.—Alcoholic. Lobar pneumonia. *Atrophic left lobe of* liver.

114/24, M., 46.—Depression of sternum and *atrophy of left lobe of liver.* Pulmonary tuberculosis.

55/21, M., 38.—Intraperitoneal haemorrhage after operation for inguinal hernia. *Fatty liver.*

153/21, M., 33.—Alcoholic, lobar pneumonia. *Fatty and toxic liver.* Toxic kidneys.

61/22, M., 31.—Alcoholic mania. *Fatty liver. Firm spleen.* Hypostatic pneumonia (?).

48/23, F., 37.—Cellulitis of scalp after injury. *Fatty liver.* Alcoholism.

79/25, F., 55.—Extensive dysenteric ulceration. *Fatty liver.*

126/23, F., 42.—*Atrophic fatty liver* (? due to novarsenobillon). Operation for gallstones.

145/23, M., 38.—Lobar pneumonia. *Fatty liver.*

92/21, F., 23.—Blood in pelvic cavity Operation. General peritonitis. *Jaundice. Yellowish liver.*

43/23, F., 30.—Mitral regurgitation and heart failure, &c. *Chronic venous congestion of liver, with jaundice.*

75/21, F., 19.—Chronic abscess, apparently primary.

96/21, M., 48.—Empyema. *Abscess of liver. Rupture into bronchus.* Partial fusion of aortic cusps.

102/21, M., 59.—Extensive carcinoma of stomach. *Adjacent abscess of liver.* Peritonitis. Pus near left wrist.

30/23, M., 14.—Pyaemia. *Abscess in liver,* abscess between lung and vertebral column. Septic pneumonia.

68/23, M,, 53.—*Amoebic abscess of liver.* Amoebic ulceration of caecum. Secondary subphrenic abscess and pericarditis. Infarcts in lung.

38/23, M., 46.—Fracture of skull, &c. *Small loculated cyst of liver.*

79/20, M,. 65.—Broncho-pneumonia. Slight interstitial fibrosis of kidneys. *Two or three small-sized cysts in liver.*

59/21, M., 77.—Emphysema. Hypostatic pneumonia, &c. *Small angioma of liver.*

156/23, M., 49.—Syphilitic aortitis. Cradiac hypertrophy and dilatation. *Small nodules (specks) in liver.*

25/25, F., 63.—*Empyema of gall-bladder. Operation. Pus still present. Adhesions. Fibrotic mass, with pus, adherent to hepatic flexure.* Toxic senile heart Early pericarditis. Thrombosis of popliteal vessel. Marked fat infiltration of pancreas.

88/20, M., 86.—Gangrene of foot. Atheroma. Arterio-sclerosis of kidneys. *Gall bladder and ducts distended, with enlarged lymph glands.*

35/23, F., 39.—*Jaundice. Fibrotic obstruction in cystic duct. Incision into common duct. Blood clot.* Intestinal ileus. Marked p.m. gas formation.

155/21, F., 70.—Thrombosis in both ventricles. Coronary disease, etc. *Honeycomb tip of gall bladder.*

38/21, M., 65.—Carcinoma of stomach, secondaries in liver. *Acute cholecystitis.* Subphrenic abscess.

65/22, F., 65.—Subphrenic abscess, following *cholecystotomy.*

77/22, F., 55.—Subphrenic abscess, following *cholecystotomy.* Abscesses in abdominal wall, lungs. Septic broncho-pneumonia. Goitre.

GALLSTONES.

106/24, Chinaman, 67.—*Gallstone.* Impacted fracture of femur. Bed-sores, &c.

127/24, M., 70.—*Gallstones,* with carcinoma of rectum.

164/24, M., 78.—Organisation of lungs, with carcinoma and tuberculosis. *Gallstones.*

166/24, M., 58.—Aneurysm eroding sternum. *Gallstones.*

53/24, M., 57.—Acute enteritis. *Gallstones.*

143/24, F., 25.—Plastic peritonitis, following operation for tubo-ovarian disease. *Gallstone.*

146/24, F., 50.—Abdominal section (nil definite found). Hypostatic pneumonia. *Gallstones and contracted gallbladder.*

199/24, F., 65.—Cerebral haemorrhage, &c. *Gallstone.*

204/24, M., 75.—Pia-arachnoid haemorrhage from aneurysm of circle of Willis. *One gallstone.*

205/24, F., 62.—Old rheumatic mitral and aortic disease. *Small gallstones.*

209/24, F., 66.—*Haemorrhage and abscess formation following cholecystectomy for gallstones, extending along paracolic gutter.* Haemorrhage in lungs. Toxaemia.

157/24, F., 48.—*Cholecystectomy for large oval gallstone.* Excision of carcinoid growth of duodenum. Fatal haemorrhage from latter. Chronic interstitial nephritis, etc.

158/24, M., 84.—Chronic interstitial nephritis, &c. Infarction of heart-wall. Broncho-pneumonia. *Gallstone.*

187/24, M., 77.—Inhalation broncho-pneumonia after rabbit bone. Some interstitial nephritis, &c. *Gallstones.*

113/24, M., 61.—*Gallstones, with ulceration into peritoneal cavity, and haemorrhage therefrom.* Atheroma. Vegetations on arch of aorta.

64/24, F., 77.—Cerebral haemorrhage. Cardiac hypertrophy. Renal calculi. *Gallstone.*

118/23, M., 57.—Anthrax. *Gallstones.*

88/22, M., 68.—Fractured skull, &c. Broncho-pneumonia. Slight interstitial nephritis. *Gallstones.*

20/22, F., elderly.—Tuberculous kidney, &c. *Gallstones.*

148/20, M., 71.—*Gallstones.* Senility.

94/24, F., —.—Interstitial nephritis. Hypertrophied and dilated heart. Atheroma of aortic valve, &c. *Gallstone.* Coagulation necrosis in gastric mucosa.

57/23, F., 67.—Pulmonary tuberculosis. Atrophy of organs. *Gallstones.*

69/23, F., 55.—*Pulmonary tuberculosis. Gallstones with contracted gallbladder.* Brown atrophy of heart.

106/23, M., 65.—Pulmonary tuberculosis, with cavity. Influenzal broncho-pneumonia. Paralysis agitans? Acute ulcers of stomach. *Gallstones.*

9/22, F., 79.—Degenerated area with haemorrhage near ·ntic·lar nucleus. Chronic nephritis with cysts. Atheroma. *Empyema of gallbladder with stone.*

63/22, F., 45.—Ovarian cysts (double). Deposits in liver. *Gallstones* (? malignant growth of gallbladder.)

91/22, F., 49.—*Gallstones. Contracted gallbladder. Intestinal adhesions.* Degenerated hydatid of liver.

89/22, F., 35.—Puerperal sepsis, &c. *Gallstones.*

52/23, M., 39.—Syphilitic cirrhosis of liver. *Gallstones.* Peculiar suprarenals.

53/23, F., 69.—Pernicious anaemia. *Gallstones.* Small ovarian cyst and cervical polyp. Thrombosis of popliteal vein. Bedsores.

50/23, M., 57.—Mitral disease. Heart failure. *Gallstone.*

98/21, M., 65.—Brill's Disease? Lobar pneumonia. Pleurisy. *Gallstone.*

132/21, F., 69.—Acute haemorrhagic pancreatitis. Fat necrosis. Pale liver and kidney. *Gallstones, one blocking ampulla.*

172/23, F., 55.—Acute pancreatitis with fat necrosis *Gallstones. Dilated common duct.*

16/22, F., 70.—Cellulitis of calf. Thrombosis of posterior saphenous vein. Pulmonary embolism. *Mucocele of gallbladder with stone.*

124/23, M., 76.—Coma after catheterisation. Cystitis. Vegetations on aorta. Infarcts. *Gallstone.*

125/23, M., 75.—Enlarged prostate. Cyst and stone. Pyelitis. *Gallstones.* (?) Small degenerated hydatid of liver.

126/23, F., 42.—Atprophied fatty liver (? due to hovarsenobillon.) *Operation for gallstones.*

135/23, M., 64.—Paget's disease. Calculous nephritis and perinephritis. *Calculi in* bladder and *gallbladder.* Oedema of lungs. Hydrocele.

40/23, F., 39.—Peritonitis after appendicitis. Chronic interstitial nephritis. Hypertrophy of left ventricle. *Flat gallstone concretion.*

197/23, M., 66.—Marked atheroma. Large firm red kidneys. Hypertrophy and dilatation of left ventricle. *Gallstones.*

200/23, M., 65.—Atheroma of coronary vessels, &c. Some interstitial nephritis. Renal calculus. *Gallstones.*

13/25, M., 48.—Lobar pneumonia (alcoholic patient). *Cholelithiasis*, pericholecystitis and perihepatitis.

85/20, F., 83.—*Impacted gallstone.* Slight ulceration of intestine high above the obstruction. *Gallbladder adherent to duodenum. Ulcerated pocket in duodenum. Small stone in common duct.*

70/21, M., 64.—Tuberculosis of vertebrae. Compression myelitis. Septic pyelonephritis. *Gallstones.*

52/25, M., 29.—Old ankylosed tuberculous hip with sinuses. Organising lobar pneumonia. Myelin kidneys. Large spleen. *Gallstone.*

61/25, F., 42.—Cerebral haemorrhage from hyperpiesis. *Gallstone.* Large fibro-myoma of uterus.

93/21, F., 71.—Mitral stenosis. *Distended gallbladder with gallstones.* Atheroma of aorta. Retention cyst of kidney. Healed pyloric and duodenal ulcers.

110/21, M., 79.—Lobar pneumonia. Polyp of bladder. Old urethral stricture. Chronic interstitial nephritis with cysts. *Gallstones.*

157/23, M., 67.—Gangrene of small intestine from detachment of thrombus from atheromatous ulcer, &c. *Gallstones.*

207/23, F., 47.—Colotomy. Removal of (?) malignant mass in sigmoid. Leakage. Peritonitis. *Gallstones.*

DIABETES.

61/20, M., 56.—*Diabetic coma. Fibrosis of pancreas.* Atheroma.

68/20, M., 46.—*Diabetes.* Dilated lacteals in small intestines with fibrosed mesenteric glands.

2/21, M., 83.—*Diabetes.* Prostatic enlargement. Genito-urinary infection. Vesical calculus. Old volvulus.

74/21, F., 57.—*Diabetes. Pancreas tough, shrunken.* Chronic interstitial nephritis. Hypostatic pneumonia.

127/21, F., 38.—Mastoiditis. *Diabetes.* Double pyelitis and haemorrhagic perinephritis. Large firm spleen.

127/22, M., 58.—*Diabetes. Pancreatic calculi and fibrosis.*

161/22, F., 62.—Slight pericarditis. Infarction of heart. Atheroma. *Diabetic coma.*

140/24, F., 31.—Lobar pneumonia. *Diabetes (pancreas apparently normal).* Cloudy swelling.

107/24, M., 65.—Hypertrophied and dilated heart (heart failure). Large red, granular kidneys. Tuberculosis of right suprarenal. *Diabetes (pancreas normal).*

117/24, F., 73.—*Diabetes. Pancreas fibrotic* (?) Small area of cerebral softening with atheroma.

123/24, F., 17.—Cerebral haemorrhage. Persistent thymus. Malpighian bodies prominent. *Diabetes.*

32/25, F., 33.—Tuberculous broncho-pneumonia. *Diabetes with small pancreas.* Meckel's diverticulum.

88/23, M., 32.—*Diabetic coma unaffected (?) by insulin. Small pancreas* and thyroid. Bronchitis and slight broncho-pneumonia, tracheitis, &c. Pus in middle ears and ethmoid cells. Old trauma of brain.

161/23, M., 66.—Gangrene of foot. Large liver. *Diabetes and* acidosis (pancreas apparently normal). Abscess near vesiculae seminales. Broncho-pneumonia (slight). Cyst in kidney.

PANCREATITIS, ETC.

132/21, F., 69.—*Acute haemorrhagic pancreatitis. Fat necrosis.* Pale liver and kidneys. Gallstones. Gallstone blocking ampulla.

119/23, M., 51.—*Haemorrhage pancreatitis.* Pressure on duodenum.

100/23, F., 63.—Mitral stenosis. Recent slight pericarditis. Old infarcts in lungs. *Acute haemorrhagic pericarditis with fat necrosis.* Peculiar greenish-grey kidneys. Marked atheroma (? syphilitic).

172/23, F., 55.—*Acute pancreatitis with fat necrosis.* Gallstones. Dilated common duct.

92/24, F., 80.—*Acute necrotic pancreatitis with fat necrosis.* Lobar pneumonia.

65/20, M., 42.—*Chronic pancreatitis. Fat necrosis.* Fibrosis of liver.

69/20, M., 57.—*Cirrhosis of pancreas.* Biliary obstruction and cirrhosis of liver.

160/22, M., 54.—*Calculi and fibrosis of the pancreas.* Infarcts in the lung. Thrombi adherent to pulmonary artery. Carcinoma of stomach.

127/22, M., 58.—Diabetes. *Fibrosis of pancreas and calculi.*

2/25, F., 69.—Dilated right heart. Arterio-sclerosis. Some interstitial nephritis. *Chronic pancreatitis.*

95/23, F., 33.—Exophthalmic goitre. Auricular fibrillation. Death after quinidine. Much enlarged spleen. Hypertrophied and dilated left ventricle. ? *Some fibrosis of pancreas.*

23/20, M., 68.—Carcinoma of stomach. *Spots of fat necrosis in pancreas.*

55/24, M., 81.—Intense ulcerative entero-colitis. *Fat necrosis in pancreas.* Emphysema.

67/20, M., 25.—*Ruptured pancreas (accident).*

152/23, M., —.—*Abscess near pancreas. Sloughs of tissue.*

25/25, F., 63.—Empyema of gallbladder, adhesions, &c. Early pericarditis. *Marked fatty infiltration of pancreas.*

139/24, F., 66.—*Fatty infiltration of pancreas.* Softening of pons. Coronary atheroma. Chronic interstitial nephritis.

54/22, M., 71.—*Cyst of tail of pancreas* (?). Enlarged prostate.

IV.—Female Generative Tract, Ductless Glands, etc.

FEMALE GENERATIVE TRACT (EXCLUDING PREGNANT AND MALIGNANT CASES).

17/23, F., 73.—Comminuted fracture of femur. Senile heart. Calcified hydatid. *Calcified uterine fibroid.*

139/24, F., 66.—Softening of pons. Coronary atheroma. Chronic interstitial nephritis. *Uterine fibroids, calcifying.*

169/21, F., 53.—Columnar epithelioma of head of pancreas. *Uterine fibroid.*

133/22, F., 42.—Old carcinoma of breast. Deposits in vertebrae and liver. Secondary anaemia *Atrophied fibroid of uterus.*

83/21, F., 33.—Puerperal septicaemia. Vegetations on septum. Pericarditis, &c. *Intramural fibroid.*

61/25, F., 42.—Cerebral haemorrhage from hyperpiesis. Gallstone. *Large fibro-myoma of uterus.*

25/25, F., 63.—Empyema of gall gladder, &c. *Small ovarian cyst with papillomata. Degenerated uterine fibroids.*

43/25, F., 62.—Cerebral haemorrhage. *Small fibrous polyp of uterus.*

142/21, F., 57.—Enormous adiposity. Pituitary cyst. Broncho-pneumonia. *Polyp of uterus. Right Fallopian tube drawn out by adhesions.*

155/21, F., 70.—Thrombosis in ventricles. Coronary disease, etc. *Polyp of uterus.*

142/24, F., 84.—Purulent bronchitis and broncho-pneumonia. *Small polyp in uterus.*

70/23, F., 59.—Pulmonary tuberculosis, &c. *Hyperplasic patch in uterine mucosa.*

55/22, F., 25.—Tuberculous peritonitis. Miliary tuberculosis of lungs. Pelvic abscess. *Papillomatous mass near fundus of uterus.*

141/22, F., 60.—*Septic peritonitis. Degenerated area in uterus.*

6/23, F., 25.—*Purulent peritonitis. Necrotic area near internal os of uterus.*

12/21, F., 41.—*Left pyosalpingitis and abscess behind the uterus. General peritonitis.*

36/21, F., 38.—Pulmonary embolism following *thrombosis in internal iliac vein after removal of Fallopian tube.*

59/25, F., 43.—*Pelvic haemorrhage after double salpingo-oophoritis. Intestinal adhesions and distension.* Clot in rectum (source not detected). Pulmonary tuberculosis (extensive on one side).

143/24, F., 25.—*Plastic peritonitis following operation for tubo-ovarian disease.* Broncho-pneumonia.

56/21, F., 48.—Gummatous meningitis. Vast bedsores. Acute pyelonephritis. *Double hydrosalpinx.* Ventral hernia (fat).

207/23, F., 47.—Colostomy. Removal of (? malignant) mass from sigmoid. Leakage. Peritonitis. *Inflammatory tissue round left ovary and tube, indurated tissue at site.*

111/20, F., 38.—*Old pelvic adhesions.* Ruptured bladder (traumatic).

136/23, F., 47.—*Pelvic abscess.* Cystitis, pyelitis, chronic interstitial nephritis. Anaemia.

86/20, F., 63.—Dilated heart. Fluid in pleural cavity. *Cavernous angioma in left broad ligament.*

188/23, F., 27.—Pregnancy (?). *Varicocele of broad ligament.* Softened areas in brain. Bright yellow liver. Toxic kidneys. (?) Toxaemia of pregnancy.

108/20, F., 57.—*Proliferating ovarian cyst.* Thrombosis of inferior mesenteric vessels. Necrosis of ileum. Early peritonitis.

54/21, F., 41.—*Fatty liver. Cloudy swelling of kidney (toxic kidney) after operation ($CHCl_3$) for ovarian cyst.*

4/22, Baby F., 4 months.—Fractured skull, laceration of brain. Fractured ribs. *Cystic ovaries.*

53/23, F., 69.—Pernicious anaemia. Gallstones. *Small ovarian cyst and cervical polyp.* Thrombosis of popliteal vein. Bed sores.

78/23, F., 70.—Carcinoma of stomach. Dposits in liver and small intestine. *Cystic ovary.* Clots in popliteal veins.

121/23, F., 40.—Strychnine poisoning. Calcified mesenteric glands. *Small cyst in ovary.*

187/23, F., 63.—*Operated on for infective ovarian cyst. Secondary peritonitis and pleurisy.*

157/24, F., 48.—Cholycytitis from gallstone. Fatal haemorrhage from excision of carcinoid growth of duodenum, etc. *Two small ovarian cysts and blood cyst.* Fibro-caseous nodules in mesentery, &c.

53/25, F., 76.—Cerebral haemorrhage from atheroma. Slight interstitial nephritis. Atheroma. *Small ovarian cyst.*

168/21, F., 23.—Malignant tumor of suprarenal. Pulmonary embolism. *Fibrotic ovaries.*

138/21, F., 60.—*Thrombosis of right ovarian vein.* Infarcts in lung. Caseating tuberculous nodules in lung. A.m. thrombi in wall of left ventricle, with degeneration of wall. Moderate interstitial nephritis.

131/24, F., 48.—Cerebral softening with atheroma. *Endometrioma (?) of wall of sigmoid.*

PUERPERAL CONDITIONS.

75/20, F., 35.—*Puerperal infection of uterus. Miscarriage at 4-5 months. Gas in peritoneal cavity. Early peritonitis. Necrotic patch (large) in uterus.*

78/20, F, 28.—*Jaundice. Toxaemia. Puerperal sepsis. Honeycomb liver, &c.*

103/20, F., 41.—*Puerperal sapraemia. Infective thrombosis of uterine vein. Infective infarcts of lung with empyema. Toxic liver, kidneys.*

89/22, F., 35.—*Puerperal sepsis. Retroperitoneal abscess. Purulent peritonitis. Double empyema. Toxic kidneys.*

107/23, F., 34.—*Puerperal sapraemia (anaerobic). Disintegration of uterus. Jaundice. Infarcts of lung.*

72/25, F., 26.—*Septic metritis. Perforation of uterus. General peritonitis.*

97/21, F., 21.—*Necrotic and septic fundus uteri. General peritonitis. Cloudy swelling.*

83/21, F., 33.—*Puerperal septicaemia. Vegetations on right side of interventricular septum. Pericarditis. Pleurisy with effusion.* Infarcts in lung. Intramural fibroid.

73/21, F., 38.—*Pelvic peritonitis probably from abortion.* Perforating ulcers of intestine from drainage tube; necrotic patches in mesentery.

74/22, F., 28.—*Infection of uterus leading to necrosed patch. Large abscess in left ileum eroding sacro-iliac joint. Subcutaneous abscesses. Slight malignant endocarditis Aseptic infarcts in spleen and kidneys. Toxaemia. Streptococci. Lactating breast.*

117/23, F., 22.—*Puerperal septicaemia after miscarriage. Recto-vaginal fistula. Peritonitis.* Caseous bronchial glands.

184/21, F., 30.—*Septic broncho-pneumonia after confinement.*

191/21, F., 28.—*Caesarean section. Peritonitis. Failure of wounds in uterus and abdomen to unite.*

57/22, F., 27.—*Toxaemia of pregnancy.* Broncho-pneumonia.

188/23, F., 27.—? *Pregnancy.* ? *Toxaemia. Liver bright yellow. Acute nephritis* ? *Extensive haemorrhages in uterine tissue, broad ligament, Fallopian tubes, etc. Softened areas in brain. Varicocele of broad ligament with thrombosis.*

44/25, F., 40.—*Puerperal toxaemia. Jaundice. Haematuria. Albuminuria. Toxic kidneys. Infarcts of liver. Normal puerperal uterus with sloughy decidual fragments.*

60/25, F., 36.—*Hyperemesis gravidarum. Miscarriage at three months. Curettage. Hyperpyrexia. Toxic liver and kidneys. Imperfect corpus luteum.* Alopecia. Minute thyroid adenoma. Flabby mass in uterine wall (absorbed fibromyoma).

82/24, F., 31.—*Hyperemesis gravidarum. Acidosis. Toxic liver and kidneys.*

212/24, F., 45.—*Miscarriage. Thrombosis of right iliac vein. Pulmonary embolism and infarction.* Ball thrombus in left auricle. Small infarcts in spleen. Infarcts (?) in brain. Old mitral stenosis with recent vegetations.

109/23, F., 37.—*Post-partum haemorrhage after curettage for miscarriage.*

144/23, F, 42.—*Abscesses in both breasts. Osteomyelitis of pubes. Pyaemic lungs.* Polycystic kidneys.

49/21, F., 19.—*Pyelitis of pregnancy, fulminating.*

36/25, F., 24.—Small primary tuberculous focus in lung. Secondary tuberculous focus or probably infarct in kidney. Tuberculous meningitis. *Pregnancy. Greatly distended ovarian veins. Distended ureters.*

64/23, F., 18½.—*Hydatidiform mole of broad ligament. Haemorrhage therefrom. Infarcts in lung.*

208/24, F., 27.—Pneumococcal meningitis. Broncho-pneumonia. *Recent confinement. Thrombus of right ovarian vein.*

THYROID GLAND.

216/24, M., 46.—(Portuguese Indian). Carcinoma of stomach invading pancreas. *Adenomatous malignant* (?) *thyroid deposits in neck.*

68/21, M., —.—(Young adult Indian). Multiple infarcts of spleen (? cause). Hookworms. *Fibrotic thyroid.*

5/23, F., 49.—*Goitre (operated on), cyst in thyroid.* Fatty degeneration of heart.

95/23, F., 33.—*Exophthalmic goitre.* Auricular fibrillation. Death after quinidine. Moderately enlarged spleen. Hypertrophy and dilatation of left ventricle. ? Some fibrosis of pancreas.

105/22, F., 31.—*Exophthalmic goitre (operated on).* Hypostatic and broncho-pneumonia.

106/22, F., 22.—Broncho-pneumonia. *Exophthalmic goitre removed six years ago, now myxoedematous appearance.*

77/22, F., 55.—Subphrenic abscess after cholecystostomy. Abscesses in abdominal wall. Septic broncho-pneumonia. *Goitre.*

3/25, F., 60.—Hypostatic pneumonia. Thrown from a sulky six weeks before. Healed fracture of clavicle. *Parenchymatous goitre with cystic degeneration and calcification.*

60/25, F., 36.—Toxaemia of pregnancy with hyperpyrexia. *Small thyroid adenoma.*

94/20, F., —.—*Thyroid toxaemia. Thyroid enlarged and fibrosed.*

117/21, M., 48.—Carnified lung after pneumonia. Large white fatty kidneys Submaxillary abscess. *Large thyroid.* Sigmoid diverticula with inflammation.

SUPRARENAL GLANDS.

52/23, M., 39.—Syphilitic cirrhosis of the liver, collateral circulation. Gallstones. *Peculiar suprarenals.*

63/21, M., 48.—Aneurysm of coeliac axis. *Adenoma of suprarenal.*

71/22, M., 57.—Asthma. Bronchitis (purulent.) Emphysema. *Bilateral suprarenal adenomata.*

23/25, M., 70.—Typhoid fever. *Adenoma of suprarenal.*

76/20, M., 79.—*Suprarenal adenoma.* New growth in auricular appendix.

154/22, M., 53.—Aortic disease. Cardiac hypertrophy and dilatation. *Cyst in suprarenal.*

58/23, M., 84.—Enlarged prostate. *Suprarenals plastered on kidneys.*

134/21, M., 79,—Hypostatic pneumonia. Thrombi in right auricular appendix. Atheroma. *Intensely congested suprarenal glands.*

SPLEEN.

12/24, M., 22.—*Splenunculi present.*

145/24, M., 44.—Fibrosis and bronchiectsais. *Small white dots in spleen.*

153/24, F., 34.—Very large waxy-looking kidneys. Calculi present. Vegetations on tricuspid valve. *White specks in spleen.* Slight broncho-pneumonia.

152/22, M., 40.—*Large firm black spleen.*

68/21, M., —.—(Young adult Indian). *Multiple infarcts of spleen (cause ?).* Fibrotic thyroid.

95/23, F., 33.—Exophthalmic goitre. Auricular fibrillation, death from quinidine sulphate. *Much enlarged spleen.* Hypertrophy and dilatation of left ventricle. ? Some fibrosis of pancreas.

52/25, M., 29.—Old ankylosed tuberculous hip with sinuses. Organizing pneumonia (lobar). Extensive lipoid and amploid changes in the kidneys. *Large spleen (? amyloid).* Gallstone.

105/24., F., 21.—*Amyloid spleen and liver.* Pulmonary tuberculosis with cavitation. Caseous mesenteric glands. Tuberculous ulcers of intestine.

LYMPH GLANDS, ETC.—LYMPHOID TISSUE.

220/24, M., 42.—*Enlarged red lymph glands, beside abdominal aorta,* etc.

173/24, M., 14.—Acute pulmonary oedema following epileptic fit. *Enlarged thymus and nodules in lower Peyer's patches.*

123/24, F., 17.—Cerebellar haemorrhage. *Persistent thymus. Malpighian bodies prominent in spleen.* Diabetes.

PERNICIOUS ANAEMIA.

18/20, M., 62.—*Pernicious anaemia. Aplastic bone-marrow.* Old tuberculous lesion at left apex.

29/20, F., 55.—*Pernicious anaemia.*

178/21, F., 52.—*Pernicious anaemia. Haemosiderin liver. Chocolate-colored femur marrow.*

29/22, M., 41.—*Pernicious anaemia. Fatty changes, &c.*

42/22, M., 55.—*Pernicious anaemia.* Diffuse pleuritic nodules.

126/22, M., 39.—*Pernicious anaemia. Haemosiderin liver. Erythroblastic marrow.*

53/23, F., 69.—*Pernicious anaemia.* Gallstones. Thrombosis of popliteal vein. Bed sores.

72/23, M., 62.—*Pernicious anaemia. Haemosiderin liver, fatty heart, red bone marrow.*

105/23, M., 73.—*Pernicious anaemia.*

31/24, M., 59.—*Pernicious anaemia.* Carcinoma of cardiac end of stomach. *Erythroblastic bone marrow. Some haemosiderin in liver.*

APLASTIC ANAEMIA.

159/21, M., 18.—*Aplastic anaemia. Fatty degeneration of heart. Haemorrhages in lungs.*

186/21, F., 28.—*Aplastic anaemia.* Mesenteric tuberculosis. Miliary tuberculosis.

SECONDARY ANAEMIA.

133/22, F., 42.—Old carcinoma of breast. Deposits in vertebrae, liver. *Secondary anaemia with myelocytes.*

ANAEMIA.

42/23, M., 75.—*Petechiae. Anaemia. Very large rather firm spleen. Red bone marrow.* Haemosiderin liver. Plugged vessel in stomach. Some interstitial nephritis.

136/23, F., 47.—Pelvic abscess. Cystitis and pyelitis. Chronic interstitial nephritis. *Anaemia.*

PROFOUND ANAEMIA OF PREGNANCY.

112/24, F., 26.—*Profound anaemia of pregnancy.* Atrophic heart. *Petechiae in lung. Jelly-like bone marrow.* Ulceration of ileum. Sloughing oesophagitis.

LEUKAEMIA.

143/20, M., 66.—*Acute lymphatic leukaemia apparently following infection of hand. Infiltration of wounds. Enlarged lymph glands. Large spleen.*

17/21, M., 31.—*Myeloid leukaemia. Diminution in leucocytes after benzole. Red bone marrow. Enlarged rather firm spleen. Haemosiderin liver.*

10/23, M., 38.—*Leucosarcoma. Deposits in kidneys, prostate, heart, liver, ribs, vertebrae. Foetal type of blood.*

61/24, M., 15.—*Acute lymphatic leukaemia.*

48/24, M., 69.—*Lymphatic leukaemia. Enlarged pelvic, abdominal and mediastinal glands. Large spleen, with white specks. Broncho-pneumonia and infarct.*

212/24, F., 64.—*Acute lymphatic leukaemia (?) (early). No enlarged glands (?) Slight haemosiderin.*

64/25, M., 50.—*Myeloid leukaemia, probably early (red bone marrow, large liver and spleen, red aortic glands). Staphylococcus aureus* infection of axilla. Vomited matter in bronchi.

LYMPHOID DYSCRASIA (? LYMPHO-SARCOMA).

74/25, M., 63.—*Enlarged tough buff glands in abdominal cavity, mediastinum, neck, axillae, inguinal regions. Lymphoid hyperplasia of intestine.*

HODGKIN'S DISEASE.

71/24, M., 50.—*Endotheliomatous development on Hodgkin's disease affecting the glands of neck, mediastinum and retroperitoneum.* Secondary deposits in liver.

159/24, M., 42.—*Hodgkin's disease—retroperitoneal and aortic glands. less so mediastinal, small white specks in liver and spleen.* Broncho-pneumonia.

29/25, M., 50.—*Hodgkin's disease (Glands in neck small, fibrotic; superior mediastinal glands much enlarged, caseated centres; superior mesentery glands and those along aorta).* Left renal calculus and pyonephrosis. Necrotic cystitis. (?) Growth in spinal canal.

PURPURA.

74/23, M., 17.—Chronic ulcers of large and small intestines. Haemolytic streptococci in blood. *Purpura.*

BONES, ETC.

147/23, M., 74.—Red granular kidneys. Hypertrophied and dilated heart. Enlarged prostate. Calculus in bladder. *Osteoarthritis of right knee.*

89/23, M., 60.—*Old dislocated hip with absorption and mushrooming (? traumatic or tuberculous). Kyphosis, scoliosis and lordosis (? compensatory, traumatic or tuberculous).* Bronchiolitis, grangrene of lung, etc.

153/23, M., 76.—Chronic duodenal ulcer (haemorrhage). *Osteophytic outgrowths of vertebrae.* Emphysema.

120/20, M., 66.—Gangrene of foot. Pericarditis. Organising clot in audicular appendix. Arterio-sclerotic kidneys. Degenerated area in occipital lobe. *Early erosion of cartilages of knee.* Large faecal balls in rectum.

146/23, M., 55.—Partly organised lobar pneumonia at right apex. Red granular kidneys. Hypertrophied and dilated heart. *Early osteo-arthritis of hip.*

PAGET'S DISEASE OF BONE.

135/23, M., 64.—*Paget's disease.* Calculus nephritis and perinephritis. Calculi in urinary bladder and gall-bladder. Oedema of lungs.

RICKETS, ETC.

49/24, M., 13.—*Renal dwarfism. Resection of femur for genu valgum.* Uraemia.

102/23, M., 57.—*Dwarf. Peculiar bones (? Osteomalacia).* Fractured skull, &c.

HYDATID CYSTS AS THE CAUSE OF DEATH.

8/21, M., 72.—*Enormous multiple hydatids of liver and omentum.*

62/22, M., 63.—*Hydatids of lungs, retroperitoneum, kidney and spleen.*

24/23, M., 28.—Mild *Staphylococcus albus* meningitis after *removal of hydatid of brain.* Slight hypostatic pneumonia.

130/23, M., 38.—*Pelvic hydatid. Hydatid of liver.* Dilated ureters. Hydronephrosis.

62/25, F., 60.—*Hydatid of liver. Subphrenic abscess (left). Empyema (foul). Collapse of lung.* Calculi in kidney (right).

HYDATID CYSTS ACCIDENTALLY PRESENT.

28/21, F., 74.—Fibrotic kidney. Hypertrophied heart. *Calcified hydatid of liver.*

51/20, M., 58.—General peritonitis. *Calcified hydatid of liver.*

90/21, M., 38.—Fracture of skull. *Old hydatid of liver.*

147/21, M., 69.—Lobar pneumonia. *Enormous hydatid of liver.*

171/21, F., 87.—Bronchitis. Coronary atheroma. Slight fibrosis of kidneys. *Calcified hydatid of liver with warty daughter cysts.*

22/22, M, 65.—*Old hydatid cavity (?) between liver, kidney, and base of right lung.* Soft area in brain. Atheroma.

91/22, F., 49.—Gallstones. Contracted gallbladder. Intestinal adhesions. *Degenerated hydatid of liver.*

97/22, M., 36.—Tuberculosis of liver. Tuberculous meningitis. *Hydatid of liver.*

17/23, F., 73.—Comminuted fracture of leg. Senile heart. *Calcified hydatid of liver.*

96/23, M., 51.—Chronic interstitial nephritis. Hypertrophied and dilated heart, &c. *Degenerated hydatid of liver.*

170/23, F., 58.—Malignant cyst-adenomata of ovaries. Peritoneum involved. *Hydatid of liver.*

84/24, F., 17.—Actinomycosis of lung. Deposits in leg and brain. *Hydatid of liver.*

151/24, M., 64.—Carcinoma of stomach. Pulmonary tuberculosis. *Degenerated hydatid of liver.*

157/24, F., 48.—Excision of gallbladder and carcinoid growth of duodenum. Haemorrhage from latter. *Large degenerated hydatid of liver.*

170/24, M., 70.—*Calcified hydatid of liver.* Lobar pneumonia and empyema.

13/24, M., 77.—*Old hydatid of liver.* Dysenteric ulcers of colon. Fibrotic kidneys.

21/24, F., 39.—*Degenerated hydatid of liver.* Acute infective periostitis of scalp. Lobar pneumonia. Chorea.

77/25, M., 68.—Carcinoma of stomach. Pleuritic effusion. *Small calcified hydatid in liver.*

OTHER HELMINTHS.

68/21, M., —.—(Young adult Indian). *Hookworms.* Multiple infarcts (?) of spleen. Fibrotic thyroid.

72/21, M., 53.—Strangulated inguinal hernia. *Oxyurides.*

ACIDOSIS.

161/23, M., 66.—Gangrene of foot. Large liver. Diabetes and *acidosis.* Pancreas apparently normal. Abscess near vesiculae seminales. Broncho-pneumonia (slight). Cyst in kidney.

131/21, F., 46.—Mental depression. Collapse of lobe of lung. Hard faeces in colon. *Acidosis.*

GANGRENE.

137/22, F., 81.—Pyelitis with septic kidneys. *Early gangrene of feet.*

46/23, M., 68.—Emphysema. *Marked peripheral atheroma and clot in popliteal artery leading to gangrene.*

181/23, M., 84.—Occlusion of renal artery. Atrophy of kidney. Marked atheroma. *Gangrene of feet.* Hypostatic pneumonia. Calcified aortic valve.

197/23, M., 66.—*Gangrene of right foot, slightly of left. Marked atheroma of arch and descending aorta, probably causing the gangrene.* Atheroma of coronaries. Large firm red kidneys. Hypertrophy and dilatation of left ventricle. Infarcts in lungs.

88/20, M., 86.—*Gangrene of foot. Marked atheroma.* Arterio-sclerosis of kidneys. Gallbladder and ducts distended, with enlarged lymph glands.

94/22, M., 74.—Coronary atheroma. Degenerated area in left ventricle. Aortic atheroma. *Gangrene of toes.* Scarred kidneys.

120/20, M., 66.—*Gangrene of foot.* Pericarditis. Organising clot in auricular appendix. Atheroma. Arterio-sclerotic kidneys. Degenerated area in occipital lobe. Early erosion of cartilages of knee.

161/23, M., 66.—*Gangrene of foot.* Large liver. Diabetes and acidosis. Pancreas apparently normal. Abscess near vesiculae seminales. Slight broncho-pneumonia. Cyst in kidney.

NO SUFFICIENT CAUSE FOUND FOR DEATH.

215/24, Lascar, M., 29.—*Small carbuncular abscess of buttock (?developed after illness began). No evidence of septicaemia or pyaemia. Congestion of abdominal viscera. Distension of right heart. Toxaemia?*

181/21, F., 41.—*Melancholia. No obvious cause for death. Some mitral stenosis.*

133/23, M., middle-aged.—*Broncho-pneumonia. Death whilst having battery applied. Muscles contracted.*

IMMATURITY.

45/23, 5 hours, M,—Immature (7 months). *Patent foramen ovale and ductus arteriosus.*

P.M. GAS FORMATION.

35/23, F., 39.—Jaundice. Fibrotic obstruction in cystic duct. Incision into common duct. Blood clot *Intestinal ileus. Marked p.m. gas formation.*

HAEMORRHAGE FROM VARICOSE ULCER.

143/23, F., 48.—*Haemorrhage from varicose ulcer.* Alcoholic, wet brain.

ULCERS.

59/21, M., 77.—*Chronic ulcer of leg.* Emphysema. Hypostatic pneumonia. Fatty infiltration of heart. Chronic interstitial nephritis.

SYPHILITIC ULCERS.

39/22, M., 10.—Juvenile G.P.I. *Syphilitic ulceration of palate.* Vegetations on aorta. Broncho-pneumonia, bronchitis and bronchiectasis.

EMACIATION, ETC., ATROPHY.

98/24 .—(*Lascar*), *aged ? Emaciated. Great atrophy of heart. Oedema of ankles. No obvious cause of death (beri beri suspected, ? will to die).*

153/23, M., 76.—Chronic duodenal ulcer with fatal haemorrhage. Emphysema. *Atrophy of organs.*

SENILITY.

148/20, M., 71.—Gallstones. *Senility.*

IODIDE RASH.

199/23, F., 58.—*Iodide rash of face.* Acute purulent pericarditis, probably secondary to infection from this.

GOUT.

80/22, M., 74.—*Gouty deposits in fingers. Granular kidneys with gouty streaks.* Double inguinal hernia. Hydrocele. Atheroma.

LEAD.

89/21, M., 40.—*Granular contracted kidneys (lead history).* Cardiac hypertrophy. Slight pericarditis.

CUTANEOUS HORN.

153/23, M., 76.—Chronic duodenal ulcer with fatal haemorrhage. Emphysema. Atrophy of organs. *Cutaneous horn of ear.*

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