

A descriptive catalogue of the pathological specimens in the museum of the Hospital for Consumption and Diseases of the Chest, Brompton / by Percival Horton-Smith ; with the assistance of William Thomas Mullings.

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CATALOGUE OF THE MUSEUM
OF THE
HOSPITAL FOR CONSUMPTION AND DISEASES
OF THE CHEST, BROMPTON.

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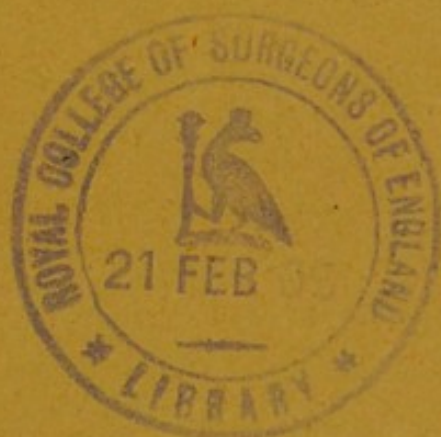
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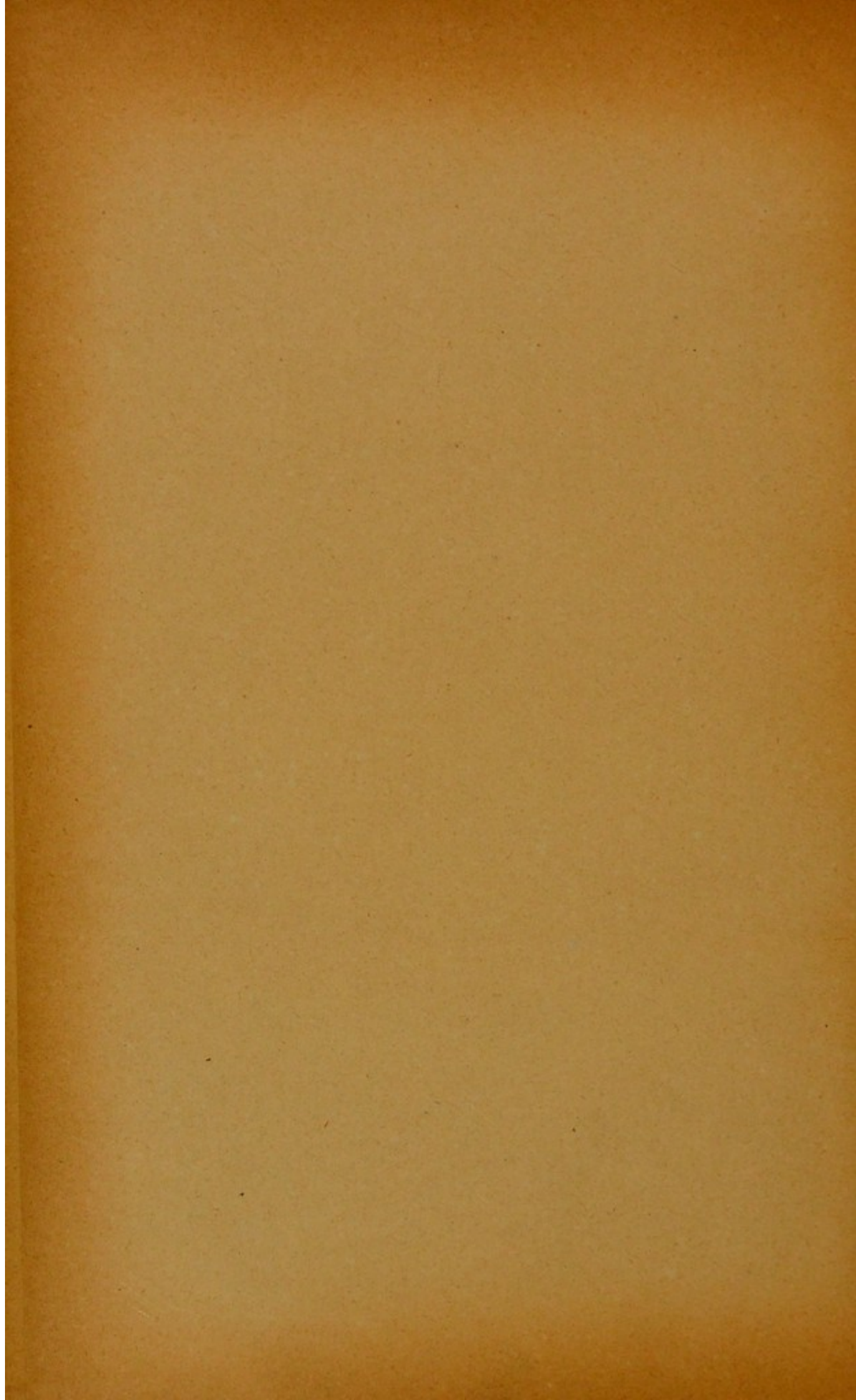
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of the Brompton Hospital.*



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A DESCRIPTIVE CATALOGUE
OF THE
PATHOLOGICAL SPECIMENS IN
THE MUSEUM

OF THE
HOSPITAL FOR CONSUMPTION AND DISEASES
OF THE CHEST, BROMPTON

BY
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WITH THE ASSISTANCE OF
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LATE ASSISTANT RESIDENT MEDICAL OFFICER

Published by Order of the Committee of Management



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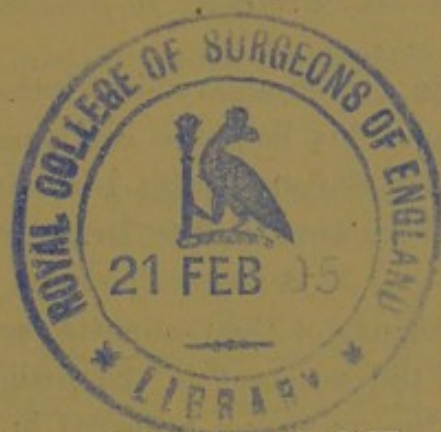
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PREFACE.

THE museum, which has gradually grown up at the Brompton Hospital under the fostering care of succeeding Curators, among whom Dr. Reginald Thompson, Dr. Kidd and Dr. Habershon should be gratefully remembered, now comprises a total of over four hundred specimens. Many of these are of great value, and amongst them may be mentioned the first case of actinomycosis observed in England, three specimens of bronchiectasis due to the impaction of a foreign body (cases which established the importance of this factor in the etiology of the disease), two examples of tuberculosis of the œsophagus, and a unique series of pulmonary aneurysms.

Several of the specimens have been figured in well-known works dealing with the subject of chest disease, many have been exhibited at the Pathological Society and described in the *Transactions*, while at the recent Congress on Tuberculosis in London an extensive selection was exhibited, and four of the rarer specimens figured in Dr. Jobson Horne's catalogue.

Under these circumstances a systematic description of our museum was urgently required, and the more so since the specimens are of great assistance to the Staff in the regular lectures which they have now given for many years. The Committee of Management, on being approached, sympathised with the proposal, and agreed to defray the cost of publication.

In the carrying out of the work, which as Pathologist fell to my lot, I have to acknowledge the very great assistance given me by Dr. Mullings, our late Assistant Resident Medical Officer, who classified and numbered

the specimens, and wrote a preliminary description of each one not already described. Without his help the catalogue would have been indefinitely delayed. To Dr. Shrubsall also I am indebted for constant help in the preparation of the work, and to Dr. Harker for reading the final proofs.

To one other also the thanks of the Committee are due—to May, who for twenty years has been the assistant in the pathological department, and whose knowledge of the specimens, prepared in nearly every case by himself, has proved invaluable.

The catalogue, as it stands, gives a short description of each specimen, with a reference to any publication concerning it, and with certain clinical data relating to the case. Should further details be required, they may be at once obtained by referring to the *Post-mortem* Book (the reference to which is given in leaded type), wherein the autopsy is fully described. Here, too, will be found the name of the Physician under whose care the patient was during life, with the date of his or her admission to the hospital, thus rendering easy a reference to the clinical notes should this be thought desirable.

It is my hope that the catalogue, which has been prepared on these lines, may be of value to my colleagues. Should this prove the case, the time which has been spent upon its production will not be regretted.

P. HORTON-SMITH.

**List of the Members of the Medical Staff of the Hospital
for Consumption, Brompton, in 1904.**

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T. DYKE ACLAND, M.D., F.R.C.P.
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S. HERBERT HABERSHON, M.D., F.R.C.P.

Surgeon.

STANLEY BOYD, B.S., F.R.C.S.

Assistant Physicians.

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H. BATTY SHAW, M.D., M.R.C.P.

Dental Surgeon.

G. L. BATES, M.R.C.S., L.R.C.P., L.D.S.

Resident Medical Officer.

MARCUS S. PATERSON, M.B.

**List of the Members of the Medical Staff who have held the
Office of Curator of the Museum and Pathologist
since the institution of the office.**

R. DOUGLAS POWELL, M.D., 1869—1875.

REGINALD E. THOMPSON, M.D., 1875—1879.

WILLIAM EWART, M.D., 1880—1882.

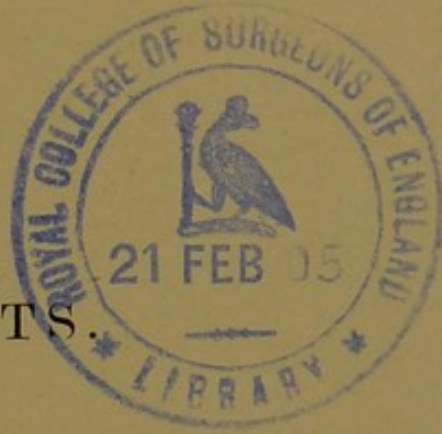
PERCY KIDD, M.D., 1882—1890.

ROBERT MAGUIRE, M.D., 1890—1892.

HECTOR W. G. MACKENZIE, M.D., 1892—1893.

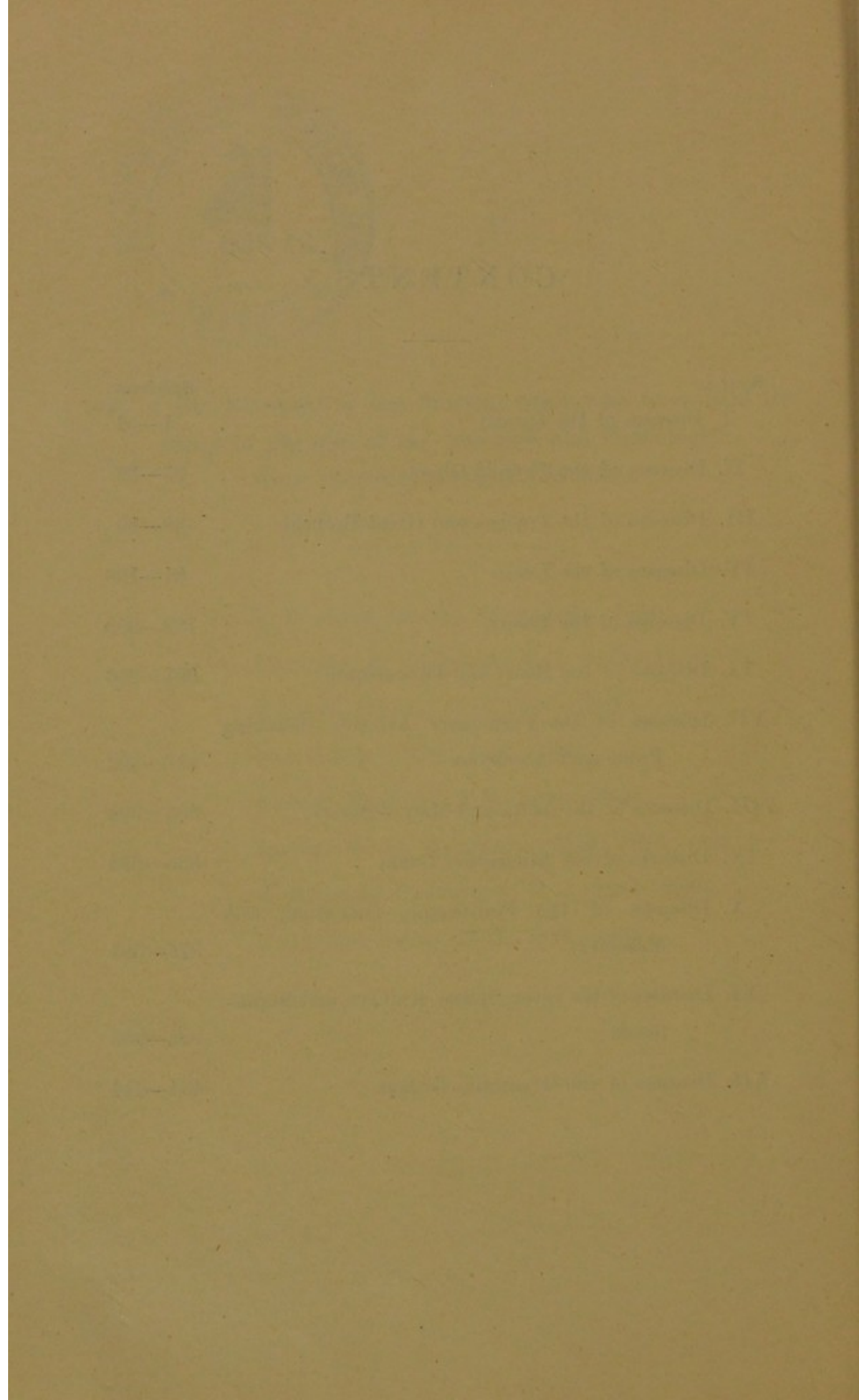
S. HERBERT HABERSHON, M.D., 1893—1900.

P. HORTON-SMITH, M.D., 1900—1904.



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PATHOLOGICAL SPECIMENS IN THE MUSEUM.

SECTION I.

DISEASES OF THE LARYNX.

EPITHELIOMA OF LARYNX.

1. A large firm cauliflower-like growth is seen to be occupying the greater portion of the left side of the larynx. **E 228**

From a woman aged 49, who for six months had suffered from loss of voice and attacks of dyspnoea.

PAPILLOMA OF LARYNX.

2. The specimen shows a large sessile papilloma, the size of a small marble, growing from the left vocal cord; also numerous similar warty granulations springing from other portions of the laryngeal mucous membrane and from the upper part of trachea (where the tracheotomy tube was in contact with tracheal wall). The tracheotomy wound is clearly seen. **N 116**

From a boy aged 3, who suffered from chronic pulmonary tuberculosis, and who was admitted for stenosis of larynx. Tracheotomy was performed. The patient quite recovered from the operation, but some time later was one morning found dead in bed. The tracheotomy tube was in its place, and not obstructed. The cause of death was not obvious. *Post mortem* the left lung showed tuberculous disease of the upper and lower lobes, partly old and partly recent; the right lung was free from disease.

TUBERCULOUS DISEASE OF LARYNX.

- (1) Showing Typical Pear-shaped Swelling of the Arytenoid Region.
3. This specimen shows the arytenoids swollen in a typical pear-shaped

manner. The under surface of the epiglottis is also ulcerated, and deep ulcers expose the arytenoid cartilages. **K 167**

From a man aged 31, who died of acute pulmonary tuberculosis with tuberculous lesions in the intestines.

(2) Showing Splitting (Longitudinal Fission) of the Vocal Cords.

4. A deep ulcer over the lower portion of the epiglottis is seen. Both cords are ulcerated, and the right cord is partially split by ulceration. **C 115**

From a man aged 21, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx, intestines, and peritoneum.

5. This specimen shows ulceration of the right ventricular band and vocal cord. The latter is split, the upper part being lost in the ulceration of the ventricle, and the lower represented by a ridge, in its posterior portion placed considerably before the normal level of the cord. **F 116**

From a girl aged 13, who died with chronic pulmonary tuberculosis, chronic endocarditis, and lardaceous disease.

6. This specimen shows a large deep ulcer occupying the left cord and causing longitudinal fission. **I 184**

From a man aged 46, who died of chronic pulmonary tuberculosis.

7. The vocal cords are split, and the arytenoid cartilages laid bare by ulceration. There is also deep ulceration at the root of the epiglottis. **L 50**

From a man aged 18, who died of chronic pulmonary tuberculosis.

8. The larynx shows extensive tuberculous disease. The right cord is split throughout its entire length. The left is ulcerated in its middle third, and over the arytenoid this process extends so deeply as to completely expose the cartilage. There is also some ulceration over the right arytenoid, but the cartilage is not exposed. **O 86**

From a man aged 23, who died with chronic pulmonary tuberculosis and tuberculous disease of the larynx and intestines.

9. The specimen shows superficial ulceration of the under surface of the epiglottis and arytenoid regions, also longitudinal fission of the vocal cords.

An old specimen of which there is no further record.

10. This specimen shows longitudinal ulceration and splitting of both cords, but more marked on the left side.

An old specimen of which there is no further record.

11. The ventricular bands and under surface of the epiglottis are ulcerated especially on the right side. There is also longitudinal ulcerative fission of the vocal cords.

An old specimen of which there is no further record.

12. This specimen shows ulcerative splitting of the anterior portion of both vocal cords.

An old specimen of which there is no further record.

(3) Showing Ulceration and Destruction of one Vocal Cord.

13. In this specimen the posterior two-thirds of the right vocal cord have been destroyed by deep ulceration. At the base of the ulcer the arytenoid cartilage is exposed. **D 67**

From a man who died of chronic pulmonary tuberculosis.

14. In this specimen, in the position of the left cord and extending on to the ventricular band, there is a deep ulcer laying bare the muscles. The under surface of the epiglottis is also ulcerated superficially. **K 129**

From a man aged 21, who died of acute pulmonary tuberculosis with tuberculous lesions in the intestines.

15. In this specimen the left cord is completely ulcerated away, and is represented by a band placed on a lower level than the normal true cord. There is also a deep ulcer over the arytenoid region. **K 58**

From a woman aged 23, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

(4) Showing Diffuse Infiltration and Ulceration.

16. This specimen shows diffuse ulceration of the lower portion of the larynx and the upper part of the trachea.

An old specimen of which there is no further record.

17. The epiglottis is greatly thickened and its under surface superficially ulcerated, as are both cords, which at their posterior ends also present a deep ulcer exposing the arytenoid cartilages. **K 191**

From a man aged 31, who died of chronic pulmonary tuberculosis.

18. The specimen shows a larynx opened to the right of the middle line. The under surface of the epiglottis and both cords are ulcerated, the left being split posteriorly. The right aryteno-epiglottic fold is extensively infiltrated and contains a large triangular ulcer.

From a man aged 38, who died of chronic pulmonary tuberculosis.

19. This specimen shows very extensive and deep ulceration. Both the vocal cords have been entirely destroyed.

An old specimen of which there is no further record.

20. This specimen shows extensive ulceration of the mucous membrane covering the whole of the interior of the larynx. It commences near the tip of the epiglottis and extends for three quarters of an inch into the trachea, where it ends abruptly. **K 94**

From a woman aged 34, who died of chronic pulmonary tuberculosis with tuberculous lesions of the larynx and intestines.

21. The whole inner surface of the larynx is extensively infiltrated and ulcerated, and only the remains of the vocal cords can be seen, their position being indicated by a large and deep ulcer.

An old specimen of which there is no further record.

22. A tuberculous ulcer is seen on the posterior part of the tongue on the left side extending towards the larynx. Both ary-epiglottic folds are swollen and ulcerated; so also is the epiglottis, especially on its right side. The internal surface of the larynx is extensively ulcerated from the epiglottis down to the cricoid. The left arytenoid cartilage is laid bare.

N 250

For history of this specimen see No. 118.

(5) Showing Ulceration laying bare the Cartilages in the Arytenoid Region.

23. The epiglottis is ulcerated extensively on its under surface, and also both ary-epiglottic folds. The cords are thickened and ulcerated, and at their posterior ends two deep ulcers lay bare the arytenoid cartilages.

K 33

From a man aged 40, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx and intestines.

24. This specimen shows a long deep ulcer just below the epiglottis which has destroyed the ventricular bands and the vocal cords, and laid bare the thyroid and arytenoid cartilages.

K 106

From a man aged 28, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx and intestines.

25. This specimen shows a deep cavernous ulcer in the left arytenoid region, exposing the cartilage.

K 175

From a man aged 30, who died of chronic pulmonary tuberculosis with tuberculous lesions in the knee, brain, and testicle.

26. In this specimen there is seen diffuse infiltration and swelling of both aryteno-epiglottic folds, with superficial ulceration of the lateral walls. Both cords are swollen and the right partially split. Over each processus vocalis there is deep ulceration, with partial destruction of the cartilage.

F 123

From a man aged 30, who died of chronic pulmonary tuberculosis.

27. This specimen shows an extensively diseased larynx opened anteriorly. The left arytenoid region is represented by a pyriform swelling. In the right arytenoid and interarytenoid regions there is great ulceration, laying bare the cartilages. There is also a deep ulcerated hole near the upper level of the cricoid cartilage.

C 217

From a man aged 38, who died of chronic pulmonary tuberculosis with total excavation of left lung, arterio-sclerosis, and heart failure.

28. This specimen shows an extreme degree of destruction in both arytenoid regions, where large irregular triangular ulcers lay bare the cartilages.

An old specimen of which there is no further record.

(6) Showing Destruction of the Epiglottis.

29. This specimen shows the root of the tongue, the tonsils, pharynx, and epiglottis all extensively ulcerated and in parts destroyed. The whole interior of the larynx is infiltrated and ulcerated, and there is a large necrotic area in the right ventricular band.

An old specimen of which there is no further record.

30. This specimen shows diffuse infiltration and ulceration affecting chiefly the epiglottis, the free portion of which is completely destroyed.

I 173

From a woman aged 29, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

31. In this specimen the epiglottis has been entirely ulcerated away, and the whole mucous membrane is greatly infiltrated, especially in the region of the arytenoids.

An old specimen of which there is no further record.

32. The root of the tongue and ary-epiglottic folds are extensively ulcerated. The epiglottis is entirely destroyed, and the whole mucous membrane of the larynx so infiltrated and ulcerated that only traces of the true cords can be seen.

K 59

From a man aged 26, who died of chronic pulmonary tuberculosis with extensive disease of the larynx, pharynx, and intestines.

33. This specimen shows the epiglottis thickened and ulcerated. In the centre of its under surface there is a small, deep, round ulcer. The cords are thickened and ulcerated. The arytenoids and aryteno-epiglottic folds are greatly infiltrated, and on the left there is a deep triangular ulcer laying bare the arytenoid cartilage.

K 159

From a man aged 37, who died of acute pulmonary tuberculosis with extreme ulceration of the larynx and intestines.

(7) Showing a Tuberculous Tumour on the Left Ventricular Band.

34. This specimen shows extensive ulceration of both ventricular bands. Arising from the centre of the left there is an irregular globular mass, ulcerated at its upper part. Both arytenoids are swollen, but the cords are healthy.

I 87

From a woman aged 41, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

SECTION II.

DISEASES OF THE THYROID GLAND.

TUBERCULOUS DISEASE OF THE THYROID GLAND.

35. In the upper portion of the left lateral lobe of the gland a calcareous mass, probably tuberculous in nature, the size of a small bean, is seen. Apart from this the organ was natural. The larynx was healthy. **O 117**

From a woman who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines, Fallopian tubes, bronchial, mesenteric, inguinal, iliac, lumbar, and cervical glands.

COMPRESSION OF TRACHEA BY ENLARGED THYROID GLAND.

36. The trachea is compressed by an enlarged thyroid. The hypertrophy is marked, and affects both lateral and middle lobes, the latter being the size of an orange. **B 15**

From a female aged 33, who had suffered with goitre for eight years and died with pulmonary tuberculosis. She had been unable to work owing to debility for nine months, had had hæmoptysis, and had suffered from palpitation and syncopal attacks. On admission there was dyspnœa, the pulse was 150, and attacks of palpitation were complained of. The signs of phthisis were not advanced, but rapidly progressed, and at the *post-mortem* examination the left apex was found excavated, and the lower portion of the lung riddled with small excavations filled with creamy pus.

37. The trachea is compressed by a greatly enlarged thyroid, the disease affecting the right lobe to a greater extent than the left. **A 69**

From a male patient aged 18, who had had goitre for four years. On admission there was dyspnœa on exertion, with frequent spasm of the platysma muscle. The dyspnœa increased and stridor became marked. Laryngotomy was performed, but death ensued from asphyxia.

38. This specimen shows unilateral stricture of the trachea due to compression of the tube by a greatly enlarged left lobe of the thyroid. The right and middle lobes are but little affected.

An old specimen to which there is no reference.

SECTION III.

DISEASES OF THE TRACHEA AND GREAT BRONCHI.

SYPHILITIC DISEASE OF TRACHEA AND GREAT BRONCHI, MOSTLY SHOWING STENOSIS.

39. This specimen shows stricture of the trachea and both bronchi following syphilitic ulceration. No evidence of tuberculosis was found *post mortem*. **C 213**

From a man aged 32, who had had syphilis ten years previously. The

case is figured in *Diseases of the Lungs*, Fowler and Godlee, London, 1898, p. 78.

40. This specimen shows ulceration affecting the lower end of the trachea and extending into the bronchial tubes. At the bifurcation the trachea is contracted. Both bronchi are stenosed. The trachea is perforated from ulceration at a spot just above the commencement of the right bronchus, while the left main bronchus is also ulcerated through half an inch from the trachea. Through the latter opening a pigmented gland protrudes. The ulceration extends into the main subdivisions of the bronchi. **C 260**

From a patient aged 43, who had syphilis twenty-four years ago. At the *post-mortem* there was no evidence of tuberculosis; arterio-sclerosis was well marked, and the kidneys were granular. Stridor and dyspnoea were present five months before death. There was also difficulty in swallowing, due to enlarged mediastinal glands.

41. The left bronchus is almost obliterated at its origin, only admitting a probe, the surrounding parts being fibrous and puckered. The left lung is converted into a series of smooth-walled cavities, the contents of which were extremely foetid; no tubercle bacilli were found in the secretions from these cavities, but the right lung showed obvious tuberculous disease. **C 238**

From a female patient aged 25, who died of chronic pulmonary tuberculosis with general lardaceous disease. The stenosis of the bronchus was believed to be syphilitic in nature.

42. This specimen shows scarring and ulceration of the trachea from the cricoid cartilage to the bifurcation. The cartilages are destroyed and the left bronchus stenosed from cicatrization. The disease was thought to be syphilitic in origin. **D 93**

From a female patient aged 43, who died of chronic pulmonary tuberculosis.

43. Just above the bifurcation of the trachea an ulcerated tract an inch long with a sinuous edge is seen. Several of the cartilages are exposed and partially destroyed. The disease, which was probably syphilitic, had led to marked stenosis of the trachea just above its bifurcation. **E 152**

From a female patient aged 25, who died of chronic pulmonary tuberculosis, but with no other sign of syphilis.

44. The specimen shows a stricture and scarring in the lower third of the trachea, and again at the origin of the right bronchus, probably due to old syphilitic ulceration. There is also recent tuberculous disease of larynx. **I 153**

From a male patient aged 51, who died of chronic pulmonary tuberculosis. He had had gonorrhoea, but denied syphilis.

45. Scarring is seen along the anterior median line of the trachea throughout nearly its whole length. It extends also into the right bronchus,

and at the junction of the latter with the trachea stenosis has resulted.

The specimen at the time of the *post mortem* was thought to be syphilitic in nature, but no further history can now be obtained.

See also Specimen 91.

TUBERCULOUS ULCERATION OF TRACHEA AND GREAT BRONCHI.

46. The specimen shows numerous tubercles scattered throughout the trachea and great bronchi. Many of these show commencing superficial ulceration. The tubercles are, for the most part, in the lower half of the trachea, the upper half being almost unaffected. The mucous membrane in the neighbourhood of the tubercles is greatly inflamed and injected. **N 108**

From a man aged 27, who suffered from chronic pulmonary tuberculosis. In addition to tuberculosis of trachea there was commencing ulceration of the intestine, and also early signs of tuberculous laryngitis.

47. Two deep and extensive tuberculous ulcers of the trachea exposing the cartilages are seen. **C 206**

From a male patient aged 30, who died of chronic pulmonary tuberculosis.

48. The specimen shows tuberculous ulceration of trachea, and also a tuberculous ulcer on the epiglottis. **A 319**

From a male patient aged 30, who died of pulmonary tuberculosis.

49. This specimen shows very extensive tuberculous ulceration of the trachea, laying bare several of the cartilages. **B 82**

From a patient who died of pulmonary tuberculosis with lardaceous disease of the kidneys, spleen, and liver.

50. The right main bronchus in this specimen is narrowed at its orifice from a scar-like contraction, probably syphilitic in origin. There is also extensive and recent tuberculous disease of the larynx and trachea. **D 63**

From a male patient aged 30, who died of chronic pulmonary tuberculosis.

51. The mucous membrane is thickened and congested in its whole extent, chiefly posteriorly; it is extensively infiltrated, and there are numerous tuberculous ulcers, some of which have laid bare and eroded the tracheal cartilages.

52. The whole of the trachea is seen to be infiltrated and studded with ulcers. The majority are small and superficial, but some are larger and extend more deeply. The main bronchi are also ulcerated, and there is extensive ulceration of the larynx. **M 205**

From a man aged 27, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines, larynx, trachea, and great bronchi.

53. The specimen shows extensive ulceration of the trachea and left bronchus, and to a less extent of the larynx. **N 24**

From a man aged 38, who suffered from chronic pulmonary tuberculosis. *Post mortem*, tuberculous disease of the intestines was also found.

DEEP ULCERATION OF TRACHEA AND BRONCHI OF DOUBTFUL ORIGIN.

54. The specimen shows ulceration of the lower portion of the trachea and of the adjoining portion of both bronchi, together with great enlargement of the bronchial glands. The trachea is natural until about half an inch above its bifurcation, where the ulceration begins. This is somewhat deep in character, and extends along both bronchi for about an inch and a half. In the right bronchus it is especially marked. It ceases below somewhat suddenly, but the mucous membrane both above and below the ulcerated portion is considerably inflamed. The bronchial glands are seen to be much enlarged, and to show on section numerous yellowish caseating patches. **N 258**

From a boy aged 6½, who died after about ten weeks' illness, suffering chiefly from broncho-pneumonia. After death, ulceration of the trachea and bronchi and extensive broncho-pneumonia were found, together with infarcts in the liver and spleen. In addition the submaxillary, cervical, bronchial, superior, anterior and posterior mediastinal, mesenteric, lumbar, and right iliac glands were much enlarged, and showed within them numerous yellowish caseous patches, which, however, on microscopical examination showed no evidence of tubercle. Cultures from the spleen remained sterile.

PERFORATION OF BRONCHUS FROM WITHOUT.

(1) By a Tuberculous Gland.

55. The red glass rod marks the situation formerly occupied by an enlarged calcareous bronchial gland, which had ulcerated through the left bronchus, and at the autopsy was found impacted in its wall. The blue probe lies in a large branch of the pulmonary artery, which has also been eroded and ulcerated through, leading to fatal hæmoptysis. **C 72**

From a female aged 15, an out-patient at the hospital, who attended with chronic pulmonary tuberculosis, and in whom death resulted from sudden hæmoptysis in the waiting room. At the autopsy tuberculous lesions were found in the intestines, larynx, the bronchial, mesenteric, and retro-peritoneal glands. See *Trans. Path. Soc.*, vol. xxxvi, p. 102.

56. This specimen shows the trachea perforated at its bifurcation by a caseous gland, which has become impacted, and is seen *in situ*. **C 208**

From a boy aged 7, who did not seem to have much the matter with him, but who died suddenly from asphyxia. *Post mortem* he was found to have caseous mediastinal and tracheal glands, with scattered tubercles in the upper lobe of the left lung. See *Trans. Path. Soc.*, vol. xxxvi, p. 104.

(2) By Spread of Ulceration from a Tuberculous Cavity.

57. The right bronchus is seen perforated by an opening the size of a threepenny piece, leading directly into a cavity in the lung. The outer surface of the bronchus, both above and below the opening, forms part of the wall of the cavity, the cartilages being here laid bare. **H 146**

From a male patient aged 44, who died of chronic pulmonary tuberculosis.

(3) By a Sinus from an Abscess, the result of Caries of the Dorsal Vertebrae.

59. The right bronchus is held open by means of glass tubes. About an inch and a half below its commencement is seen a blue probe protruding from the orifice of a sinus which traverses the lung and communicates with an abscess cavity situated along the sides of the bodies of the first nine dorsal vertebrae. At the level of the sixth it perforates the lung and bronchus by the sinus just described. **I 17**

From a male patient aged 21, who suffered from caries of the dorsal vertebrae and in addition from tuberculosis of the right upper lobe with tuberculous lesions of the intestines, and lardaceous degeneration of the liver, spleen, and kidneys.

(4) By Spread of Malignant Disease from the Œsophagus.

60. The specimen shows an epithelioma of the œsophagus, which has ulcerated through the left bronchus. The opening is surrounded by a raised ring of new growth. **I 59**

From a male patient aged 43. There were no secondary growths in any other organ. A water-colour drawing by Dr. Habershon, showing the recent *post-mortem* appearances, is hanging in the laboratory.

MALFORMATION OF RIGHT BRONCHUS.

61. The specimen shows an abnormal origin of a right bronchus to the right upper lobe. It arises above the bifurcation of the trachea.

No reference to this case can be found in the *post-mortem* records.

FOREIGN BODIES IN BRONCHI.

See Bronchiectasis. Specimens 62, 63, and 64.

BRONCHIECTASIS.**(1) Produced by Foreign Bodies.**

62. In this specimen a piece of bone the size of a molar tooth is seen to be firmly lodged an inch and a half below the bifurcation of the trachea, in the division of the bronchus passing to the right lower lobe. It lies in a deep depression of the mucous membrane, which is here

ulcerated and thickened. The bronchus below the obstruction is dilated in a cylindrical manner, and general cylindrical bronchiectasis was present throughout both lungs, though less marked in the left. The right pleural cavity contained posteriorly a loculated empyema containing fifteen ounces of pus, and anteriorly a separate serous effusion.

I 12

From a cabman aged 31, who died in the hospital with symptoms of bronchiectasis, but who never gave a history of having inhaled a foreign body. This was discovered unexpectedly at the autopsy. He stated that until fifteen months before death he enjoyed good health. He then suffered from right-sided pleurisy, and ever since had had cough with offensive sputum. He was only in the hospital for ten days before his death.

63. In the bronchus to the right lower lobe is part of an ear of corn, the stalk directed upwards. This was found lying loose in its present position in the cavity of the tube, which was not changed, except for some reddening of its lining membrane. A little below is an irregular patch of ulceration, probably corresponding to the previous position of the foreign body. All the bronchi to the lower lobe, but not elsewhere, are much dilated, and contained reddish fluid. The intervening lung is collapsed, airless, and somewhat indurated. A small thin-walled cavity in the middle lobe contained pus (no tubercle bacilli) and communicated by a sinus with the remains of an empyema which had been opened during life by an incision in the sixth right intercostal space in the nipple line.

D 10

From a lad aged 17, who had swallowed a straw. This was followed by hæmoptysis, pain in the right side, and a hard dry cough. He was admitted with signs of an empyema, and in May, 1885, an opening was made and a small amount of pus evacuated. The lad died suddenly two months later (seven months after the onset of symptoms), when an abscess in the right occipital lobe was found to have ruptured into the posterior cornu of the right lateral ventricle.

64. In this specimen a molar tooth can be seen lying with its fangs upwards at the commencement of the bronchus to the right lower lobe. This lobe is contracted and fibroid, and its bronchi are thickened and cylindrically dilated. In the left lower lobe the bronchi were similarly dilated, but not elsewhere. The right lung, and to a less extent the left, was also the seat of tuberculous disease of a chronic type, showing fibrosis and excavation.

C 254

From a man aged 50, an upholsterer, who while coughing inhaled a tooth immediately after its extraction. This occurred in November, 1882, two years and a quarter before death, and his serious symptoms dated from the accident. An attempt was made during life to extract the tooth by resecting a portion of the ninth rib at the inferior angle of the scapula, but it was unsuccessful. After a time the opening closed, but reopened later of itself and remained open until death.

(2) Specimens showing Cylindrical Bronchiectasis.

65. The left lung is seen to be generally contracted, and to present a honeycombed appearance. This is caused by the presence of numerous

2A

small cavities, which are in reality, as may be seen on careful inspection, the cross-sections of cylindrically dilated bronchi. The surrounding lung tissue is pigmented, tough, and airless. **E 75**

From a grocer aged 19, who had "pleuro-pneumonia" in 1877, followed in the succeeding year by cough, with paroxysmal and profuse expectoration. He died in 1888 with lardaceous disease of the stomach, intestines, spleen, liver, and kidneys.

66. The specimen shows the anterior part of the right lung, in which the bronchi are seen to be dilated cylindrically. On looking at the back of the specimen, where the bronchi are cut transversely, they stand out like large goose-quills. One or two small sacculations can also be made out. In the upper lobe a little recent tubercle is present. **N 217**

From a man aged 33, who had suffered from cough for ten years; the expectoration had been foetid for two. One year before death the cough and dyspnœa increased, and the foetidity of the sputum became more marked. The patient died of bronchitis.

67. The specimen shows the left lung cut open and turned back. On the left-hand side the specimen has been untouched and remains just as when first opened. On the right-hand side the bronchi have been opened up throughout their length, so as to show the general cylindrical dilatation. On examining the left-hand side it will be seen that the lung presents the appearance of being filled from apex to base with small ovoid cavities varying in size from that of a bean to a bantam's egg. When first seen the walls of these cavities were greatly reddened and inflamed, and contained a slightly foetid liquid. An examination of the right-hand side of the specimen shows that these apparently separate cavities are in reality sections (cut at varying angles) of the bronchi, which are throughout their course dilated in a cylindrical manner, with, in most cases, terminal saccular dilatations. Between the dilated bronchi there is no normal lung tissue left, but only fibrosed material. The pleura is adherent all over back and front, but not much thickened. The right lung showed no bronchiectasis at all, and, except for some scattered recent broncho-pneumonia in the lower lobe, was natural. **O 91**

From a man aged 21, who suffered from much cough and expectoration of much foul sputum. Towards the end he became dull and apathetic, but showed no sign of paralysis or optic neuritis. *Post mortem*, an abscess the size of a Tangerine orange was found in the right frontal lobe. Lardaceous disease of the spleen was also present.

68. The specimen shows a section through the left lung in which the appearances of cylindrical bronchiectasis are well seen. The large bronchi throughout both lungs were considerably dilated and thickened, but this condition is most marked in the left lower lobe. In places there is some suggestion of terminal dilatation. The mucous membrane of the dilated bronchi is reddened and inflamed. The lung tissue is strikingly little altered, showing practically no fibrosis, but a

few scattered and recent tubercles, most numerous in the right upper lobe, were present. **N 200**

From a boy aged 17, who had suffered for five years with cough and dyspnoea, and for two and a half years with foetid expectoration. He died from multiple cerebral abscesses (three in number) which had produced right hemiparesis, right hemianopia, and left facial palsy.

(3) Cylindrical Bronchiectasis leading to Septic Pneumonia and Gangrene of the Lung.

69. The specimen shows a longitudinal section through the right lung. The bronchi in all three lobes are dilated, especially in the lower, where the cylindrical bronchiectasis is marked. At the end of each bronchus there is a saccular expansion. The lower lobe is much shrunk and fibrosed, but shows no pneumonia. The upper and middle lobes are solid from broncho-pneumonia, and at the apex of the former a gangrenous cavity the size of a pigeon's egg, as well as several smaller cavities, can be seen. **N 225**

From a boy aged 16, who had suffered from cough for seven years. The expectoration had been offensive for six months. At the *post-mortem* examination the left lung also showed septic broncho-pneumonia.

(4) Cylindrical Bronchiectasis leading to Gangrene of the Lung and the Formation of a Gangrenous Cavity.

70. The specimen shows the anterior half of the right lung with a gangrenous cavity the size of a Tangerine orange in the upper and middle lobes communicating with a somewhat dilated bronchus. In the lower lobe the cylindrically dilated bronchi with saccular terminations are well seen. The glass rod passes into a simple saccular bronchiectasis, the little bronchus leading into it being perfectly natural. The pleura is adherent anteriorly, and at one spot (over the gangrenous cavity) was very soft and had almost ruptured. **N 211**

From a boy aged 13, who had suffered from cough and foul expectoration for nine months before death. For the last two months he was in the Hospital, and during that time his temperature was high and irregular. Towards the end the sputum was exceedingly foul. A few tubercles were found in one bronchial gland at the *post-mortem* examination, but there were none in the lungs.

(5) Cylindrical Bronchiectasis secondary to Empyema.

72. The specimen shows a section of the right lung. The whole lung is condensed and airless, having been apparently compressed by an old empyema, the remains of which (marked thickening and slight separation of the pleural layers) are still visible. The bronchi are dilated, and contained pultaceous material. The left lung showed chronic pulmonary tuberculosis. **M 204**

From a sailor aged 18, who died eventually with chronic pulmonary tuberculosis. The sputum was very offensive, and amounted to between thirty and forty ounces daily. There had been slight hæmoptysis.

For another example see specimen No. 175.

(6) Cylindrical Bronchiectasis complicating Pulmonary Tuberculosis.

73. The specimen shows the anterior half of the right lung. The upper lobe shows old tuberculous cavities with fibrosis, and in this lobe the bronchi are in a state of cylindrical bronchiectasis. In one situation also there is a small saccular dilatation. The middle lobe shows a cavity with fibrosis, and its bronchial tubes are somewhat dilated. The lower lobe shows a large old cavity near the apex, while the remainder of the lobe is thickly studded with recent miliary tubercles. **N 152**

From a woman aged 47, who, in addition to the disease of the lungs, showed *post mortem* tuberculous ulceration of the intestines and lardaceous disease of the spleen, kidneys, and intestines.

74. The whole lung (right) is greyish in colour, and in a condition of tough caseo-pneumonic consolidation. There are numerous elongated excavations radiating from the root of the lung and extending to the surface. These consist partly of dilated and somewhat ulcerated bronchi, and in part, especially in the upper lobe, of tuberculous cavities of some standing. **I 141**

From a woman aged 25, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx and intestines.

(7) Specimens showing Saccular Bronchiectasis.

75. The specimen shows the right lung cut into and opened. It is seen to be riddled with cavities, which were filled with yellowish-black, pultaceous, evil-smelling material. The intervening lung tissue is fibrosed, and contains tubercle, though not in a very advanced condition. The pleura is adherent all over back and front, and at the apex greatly thickened, reaching a quarter of an inch. With regard to the cavities, some (those on the left in the specimen) are evidently bronchiectatic. The dilatation of the main bronchi is obvious, and the mucous membrane lining them is similar and continuous with that lining the saccular dilatations. Smaller dilated bronchi may also be seen leaving the walls of the saccular dilatations. With regard to the large cavities on the right of the specimen, which are continuous with those on the left, it is probable that these also are dilated bronchi, for small bronchi may be seen leading off from them. At the same time tubercle is present in the consolidated lung tissue lying between the cavities, and may have had some share in their formation. The left lung showed comparatively recent tubercle in the upper lobe and in the apex of the lower lobe, but no bronchiectasis. **O 89**

From a male patient aged 16, whose illness commenced with pneumonia three years before death. Persistent cough with much foetid expectoration followed. *Post mortem*, lardaceous disease of the spleen, liver, and intestines was found.

76. The specimen shows a section of the left lung. The large bronchus leading to the base of the lower lobe is seen to be dilated in a cylindrical manner, with a bulbous enlargement at its extremity. The rest of the lobe is occupied by an irregular cavity the size of a Tangerine

orange, the contents of which on first opening were horribly offensive. The cavity was no doubt formed by the ulcerative destruction of the lung tissue lying between various dilated bronchi. Dilatation of the bronchi in the upper lobe is also seen.

From a boy who died in the Metropolitan Hospital. He had well-marked clubbing of the fingers, and the sputum was very offensive. No tubercle bacilli could be found in the expectoration during life, and *post mortem* there was no evidence of tuberculosis.

77. This specimen shows the right lung. The bronchus to the lower lobe (marked by a white glass rod) is dilated, and terminates in a cavity the size of a walnut at the base of the lower lobe, which in the recent state was filled with blood. The cavity was a saccular dilatation of the bronchus. There was no evidence of tubercle in either lung, but both were decidedly emphysematous. **K 78**

From a woman aged 34, who suffered from angular curvature of the spine, and died of fatal hæmoptysis. No aneurysm or source of the hæmoptysis could be found *post mortem*, though careful search was made; but it was probably due to ulceration of a large branch of the pulmonary artery in the wall of the saccular cavity above described, which was found filled with blood.

(8) Saccular Bronchiectasis causing death from the Rupture of an Aneurysm.

78. This specimen shows the left lung. At the anterior part of the lower lobe, and extending through the interlobar septum into the upper lobe, is a large irregular cavity into which open several dilated bronchi. The cavity contained thick curdy material of the foulest possible description. Its walls are covered with a rough greyish membrane, and on its posterior wall is a small ruptured aneurysm, through which a blue glass rod has been passed. The cavity was filled with pus and blood, and communicated with a healed external wound in the sixth intercostal space. **D 111**

From a shoemaker aged 38, who suffered from bronchiectasis, and died of fatal hæmoptysis from a ruptured pulmonary aneurysm. At the autopsy the bronchi in both lungs were found much dilated.

See also No. 77.

(9) Saccular Bronchiectasis treated by Operation.

79. This specimen shows a left lung, the upper lobe of which is normal, save that it contains a few tough pigmented nodules. The lower lobe is riddled with large irregular cavities freely communicating with one another and with a dilated bronchus. The intervening lung tissue is fibrosed. Projecting into one of the larger cavities lies a drainage-tube, which had been inserted during life. **F 58**

From a compositor aged 29, whose illness commenced with "inflammation of the lungs" eighteen months before death. On admission, twelve months later, the sputum was considerable in amount, and so offensive as to render life intolerable. The left chest was therefore freely drained eight weeks

later, and the sputum almost entirely ceased. Patient had two attacks of copious hæmoptysis, and died gradually of lardaceous disease. The bronchi in the right lung were found *post mortem* to be also dilated, but the disease was of a later date than that in the left lung.

CHRONIC BRONCHIOLECTASIS.

80. The specimen shows a honeycombed appearance of the lungs. Each of the little cavities, which on first being cut into were filled with mucus, proved on microscopical examination to be a minute bronchus inflamed and dilated, with much peribronchitis. The large bronchi were not dilated, and showed only the changes of chronic bronchitis.

N 192

From a woman aged 70, who had suffered from "winter cough" for years, but more especially during the twelve months preceding death.

SECTION IV.

DISEASES OF THE LUNGS.

DIFFUSE SYMMETRICAL PULMONARY CIRRHOSIS.

81. The lung seen is emphysematous, and shows also numerous intersecting greyish fibroid strands, which follow in part the lines of the interlobular septa, and which are separated by a varying amount of more or less healthy lung tissue. The disease consists essentially of a fibroid induration, which attains its highest development in the peribronchial sheaths. The change was symmetrically distributed throughout both lungs.

C 187

From a woman aged 37, the subject of bronchitis and emphysema. The illness started with vomiting and dyspnoea twelve months before death. At the *post-mortem* she was found to have also granular kidneys, arteriosclerosis, and a dilated heart.

The comparatively slight thickening of the pleura excludes the idea of a pleurogenic cirrhosis. The microscopical appearance of the bronchioles, on the other hand, which even in the least affected parts had undergone a fibro-cellular thickening of their outer coat, points to the bronchial or peribronchial origin of the disease, and the case would seem to come under the heading of what some German authors term "peribronchitis fibrosa," the affection being a progressive chronic bronchitis or peribronchitis leading to cirrhosis of the lung. No history of the inhalation of irritating particles could be obtained. For Dr. Kidd's full description of the case, from which the above is taken, see *Trans. Path. Soc.*, vol. xxxvii, p. 126.

BRONCHO-PNEUMONIA SECONDARY TO CARDIAC DISEASE.

82. This specimen shows a section of a deeply engorged and œdematous right lung. In the lower lobe towards the base are numerous small

light patches of broncho-pneumonia, which stand out prominently from the deeply stained lung tissue. O 56

From a man aged 20, who suffered from morbus cordis with adherent pericardium.

GANGRENE OF LUNG.

83. The left lung is deeply pigmented and shows a disorganised upper lobe, in this situation the lung tissue being converted into a ragged semi-flocculent material possessing a very offensive odour. The lower lobe is pigmented, but the lung tissue still remains. There was no evidence of tubercle in either lung. K 198

From a bootmaker aged 63, who suffered from caseous tuberculosis of the mediastinal, and to a less extent of the bronchial glands. One of the former had broken down and perforated the left bronchus, and through the hole in the latter a probe could be passed into the centre of the gangrenous area in the left upper lobe. At the autopsy tuberculous pleurisy was also found on both sides.

84. The specimen shows a section through the right lung. At the extreme apex there is a small patch of healthy lung tissue. Below this the remainder of the upper and the whole of the lower lobe show several large cavities arranged in a radiating manner, and separated from each other by a dense layer of fibroid lung. The cavities are sharply defined, and lined by a thick layer of yellowish material. In the recent state they were filled with slough having the fœtor of gangrene. The left lung presented a similar but not so advanced an appearance. I 5

From a painter aged 32, the subject of syphilis. There were no macroscopic evidences of tubercle, but after an exhaustive search a few tubercle bacilli were found in one section. See *Trans. Path. Soc.*, vol. xlv, 1894, p. 18; also a water-colour drawing by Dr. Habershon, which hangs in the laboratory, showing the recent *post-mortem* appearances.

85. This specimen shows a large irregular triangular cavity, lined with foul-smelling sloughs, involving the lateral portion of the lower lobe of the right lung. The process forming the cavity had been rapid and acute. One bronchus was found entering, and it was dilated with ragged margins. The lung tissue surrounding the cavity was firm and dense. E 70

From a hammerman aged 49, who was admitted two days before death with hæmoptysis, his illness having started somewhat suddenly ten weeks before. Whilst in the hospital the sputum was copious and very offensive.

86. This specimen shows the lower part of the right lower lobe cut open. It is the seat of a solid œdema, and in the centre is seen a large gangrenous patch the size of a walnut. The walls of this area are shreddy and sloughing, but there was no fœtor. On the opposite side can be seen a branch of the pulmonary artery thrombosed and containing adherent clots. L 133

From a girl aged 18, who died of chronic pulmonary tuberculosis.

HYDATID DISEASE OF LUNG.

87. This specimen shows the left lung. The apical portion of the upper lobe is quite solid, densely fibroid, and intersected by fibrous bands following the lines of the interlobular septa. The lower part of the lobe contains a tough-walled cavity with thin shreddy lining, the seat of a hydatid cyst. From the cavity lead two large and several small bronchi. The left lower lobe is healthy, as was also the right lung.

C 221

From a woman aged 42, who a year before death suffered from inflammation of the left side of the chest. Two months before death she complained of pains in chest and had hæmoptysis. At this time there was absolute dulness and complete absence of breath-sounds down to the third rib on the left side. One day she suddenly coughed up a large piece of membrane, followed by copious hæmoptysis and death. See *Trans. Path. Soc.*, vol. xxxvi, p. 122.

88. This specimen shows in the posterior part of the right lower lobe a thin-walled hydatid cyst the size of a small Tangerine orange. It contained turbid fluid and communicated directly with the bronchus to the lower lobe.

K 139

From an oilman aged 48, who suffered from hydatids of the liver and right lung. He had been ill for five months and had spat up blood-stained material resembling red jelly, in which were found hooklets and one scolex. He was operated upon for the hydatid of the liver, and died two days later.

STREPTOTHRIX DISEASE (ACTINOMYCOSIS) OF LUNG.

89. This specimen shows the right lung with the right half of the chest wall. The pleural surface of the right lung up to the second rib is converted into yellow pultaceous matter, which in some places has degenerated and led to perforation of the chest wall in eight or nine situations. Some of the lower ribs are bare, and some of the upper lumbar vertebræ swollen and infiltrated. A section of the lung shows areas in both upper and lower lobes in which the lung tissue has been converted into a network of tough fibrous material containing in its meshes irregular, canary-yellow masses, some the size of a millet-seed, but the majority the size of a hemp-seed. Most of them are firm to the touch, but some have softened and broken down.

E 195

From a boy aged 9, whose illness lasted nine months, and who presented on admission the signs of an empyema. A portion of the sixth rib was excised, and in the grumous, semi-caseous material discovered, very numerous granules of the ray fungus were found. This was the first case of actinomycosis recognised during life in England, and it is fully reported in Sir R. Douglas Powell's *Diseases of the Lungs* (see fourth edition, p. 309 et seq.).

90. The specimen shows the right lung. In the upper lobe and in the apex of the lower are numerous radiating, pearly-white, fibrous strands due to peribronchial thickening; these are separated from one another by firm, grey pigmented tissue, in places exhibiting a semi-translucent appearance. Scattered throughout this tissue numerous

small, irregular, yellowish-white points are seen. Near the periphery of the lung are many small globular cavities containing pus. The middle lobe and the rest of the lower lobe are studded with numerous yellowish areas of broncho-pneumonic consolidation. The appearances altogether closely resemble those seen in certain cases of pulmonary tuberculosis. Microscopical sections of the lung showed the presence of the ray-fungus, both mycelium and clubs being observed, surrounded by areas of pneumonia. **M 110**

From a boy aged 17, who was admitted with what was thought to be early tuberculous disease of the right apex, and who was operated upon for an abscess, also thought to be tuberculous, between the vertebral column and the scapula. The wound healed in three weeks, but broke down again, and in the discharge yellow granules of the ray fungus were found. The latter were then also discovered in the sputum, which had previously been examined several times for tubercle bacilli, but with a negative result. At the *post-mortem* examination, besides the pulmonary disease, the first nine ribs and the bodies of the corresponding vertebræ were all found to be affected. (See a paper in the *Lancet*, January 5th, 1901, by Mr. Godlee; "Case 2" refers to this specimen.)

For a third case of streptothrix disease of the lung see Specimen 388.

SYPHILITIC DISEASE OF LUNG.

91. This specimen shows the trachea, bronchi, and left lung. The trachea and bronchi show old scarring, thickening, and stenosis, the left main bronchus being impermeable to a probe. The upper lobe of the lung is extremely contracted, deeply pigmented and fibrosed, and contains no normal lung tissue. In the centre there is a smooth-walled cavity, into which a bronchus opened. The lower lobe is emphysematous, with reticular fibrosis at the base and along the margin. The extreme base consists of fibrous tissue extending inwards from the pleura, which is everywhere greatly thickened; in the centre of the fibrous area is a smooth-walled cavity the size of a small marble, into which a small bronchus opened. **K 67**

From a bricklayer aged 31, who had suffered from cough and dyspnoea, with pain in the left side, for three years before death, and more recently from night-sweats. On admission to the hospital he was found to have old syphilitic disease of the soft palate, and a diagnosis of syphilitic tracheal stenosis was made. Three months before death he brought up in a few days a quart of blood-stained sputum, and from that time gradually sank.

See *Diseases of the Lungs*, Fowler and Godlee, London, 1898, pp. 441, 442, where the specimen is described and figured.

MALIGNANT DISEASE OF LUNG.

(1) Carcinoma.

92. The specimen shows the left lung, the centre portion of which is invaded by growth, which has spread in along the root of the organ. White radiating prolongations are given off from the central mass towards the periphery, the invaded lung tissue being deeply pigmented

and much collapsed. Anteriorly the growth involved the mediastinal glands and formed a large mass in front of the pulmonary artery and the aorta, compressing the transverse portion of the arch and the right branch of the pulmonary artery, and leading to the thrombosis of the latter. The growth had also invaded the pericardium in the region of the left auricle. **C 179**

From a man aged 44, whose illness began nineteen months before death, with pain in the left side and urgent dyspnoea. One year before death there was considerable hæmoptysis. The physical signs were those of consolidation of the left upper lobe, but in the second and third intercostal spaces there was a visible and palpable impulse, with systolic murmur heard posteriorly.

Microscopically the growth proved to be a carcinoma (Dr. Kidd), and it had probably originated in the bronchial epithelium near the root of the lung.

93. In the section of this lung (seen on reversing the specimen) very numerous small white nodular patches of new growth are visible; these are the result of a general infiltration round the bronchi of carcinomatous material. The sub-pleural lymphatics are similarly infiltrated with new growth, and stand out very clearly from the deeply pigmented lung. **L 173**

From a man aged 47, who died of malignant ulceration of the stomach. The disease had spread to the lungs through the celiac and posterior mediastinal glands, but the infection of the lungs gave rise to no symptoms.

(2) Sarcoma—Primary.

94. The specimen shows a section of the right lung. The lower lobe is the seat of a new growth, which is irregularly lobulated and free from softening. Surrounding the main mass the lung tissue is infiltrated with irregular grey mottled and deeply pigmented nodules. **M 57**

From a man aged 58, who had suffered from weakness and cough for eight months before death, and who two months before brought up half a pint of blood. He died after some hours of urgent dyspnoea. The physical signs were those of a pleural effusion, and thirty-six ounces of blood-stained fluid were drawn off. A secondary growth was found in the right supra-renal gland. The bronchial and mediastinal glands were normal.

Microscopically the disease proved to be a sarcoma, the cells of which were of rather a large type.

95. The section of the lung shows a large mass of new growth occupying a large portion of the upper and lower lobes of the right lung. It is spreading into the organ along the bronchi. In the recent state the growth was seen to be composed of numerous small, soft, white, nodular growths, varying in size from a pea to a bean. The pleura over the upper lobe and also the interlobar septum is occupied by new growth, forming a band about half an inch thick. The bronchial, mediastinal, and axillary glands showed only slight and recent infection. The case, therefore, appeared to be one of primary sarcoma of the lung. **B 215**

From a man aged 37, who had given a history of rheumatic pains in the joints, cough, and hæmoptysis for eight months before death. The signs at first were those of a pleural effusion, but frequent punctures failed to find

fluid. No secondary growths were found after death, with the exception of the recent infection of the glands.

Microscopically the growth proved to be a round-celled sarcoma.

(3) Sarcoma of the Mediastinum invading the Lung.

96. The specimen shows a large growth springing from the glands at the root of the right lung, and invading the lower lobe, compressing the bronchus and causing broncho-pneumonia. There was a small empyema at the base, which had opened into one of the divisions of the bronchus to the lobe. I 101

From a man aged 49, in whom secondary growths were found in the liver. Microscopically the disease proved to be a small round-celled sarcoma.

97. The specimen shows a section through the anterior part of the right lung. The upper lobe is almost entirely replaced by new growth. The mass was firm to touch, and on section exuded milky fluid. The middle lobe and upper portion of the lower lobe are slightly invaded by growth. This originated in the bronchial glands, and secondary growths were found in the right kidney. N 195

From a man aged 47. One year before death he "caught cold," and had to leave off work. Four months later cough and dyspnoea commenced, which were followed by emaciation. Microscopically the growth proved to be a lympho-sarcoma.

98. A section of the right lung is shown, which is invaded by growth apparently starting in the bronchial glands. The growth involved the root of both lungs, compressed the right bronchus, and involved both vagi. The section shows greyish mottled and pigmented tissue, in some parts paler than others. The growth has spread along the course of the perivascular and peribronchial lymphatics, which are everywhere surrounded by masses of greyish tissue. The pleura is greatly thickened, and there is a small calcareous nodule at the apex of the lung. I 128

From a man aged 45, who died with secondary deposits in the spleen, heart, peritoneum, and lymphatic glands.

Microscopically the growth proved to be a lympho-sarcoma, with considerable development of the fibroid elements.

99. The specimen shows a section through the upper lobe of the left lung invaded and replaced by new growth. The alteration in shape and the enlargement of the lobe are very marked. The growth had originated in the bronchial glands and spread thence into the pericardium, where a mass three inches long, two and a half inches broad, and half an inch thick was found; it had also infiltrated the left ventricle. A small shell of lung tissue alone remains in the upper lobe. The lower lobe showed many scattered patches of broncho-pneumonia, but no new growth. The right lung was natural. N 127

From a man aged 48, who had suffered from cough and emaciation for six months before death. The growth microscopically proved to be a lympho-sarcoma.

(4) **Sarcoma of the Mediastinum invading a Lung already affected with Tuberculous Disease.**

100. The specimen shows the right lung invaded by growth which has spread in from the bronchial glands along the vascular and peri-bronchial lymphatics. The growth involved the lower end of the trachea and compressed the whole of the left bronchus and the branch of the right bronchus to the lower lobe. Microscopically it proved to be a lympho-sarcoma. The numerous small cavities present in the right lower lobe contained thick pus, in which there were numerous tubercle bacilli, while similar organisms were also found in scrapings from the cavities in the left upper lobe. D 189

From a shoemaker aged 29, whose illness began nine months before death with pleurisy on the right side. The physical signs were those of an old pleurisy, with some contraction and uncovering of the heart. There was also enlargement of glands on the right side in the neck and axilla, which had pressed upon and caused dilatation of veins of the right side. A mass of new growth was also found invading the anterior portion of the third lumbar vertebra.

101. The specimen shows the posterior portion of the right lung, together with the right half of the mass of new growth affecting the anterior mediastinal and bronchial glands, the latter twisted somewhat posteriorly. Occupying the anterior mediastinum, and partly covered in front by a film of lung tissue, is seen a mass of new growth about as large as a cricket-ball. This is situated in the anterior mediastinal glands, and is continuous below with a mass invading the bronchial glands. The growth had seemingly started in the anterior mediastinal glands. It has compressed and eaten into the superior vena cava, and to a slight extent both innominate veins near their junction with the former, but no symptoms of compression were observed during life. The growth had commenced to invade the pericardium and the left bronchus, but neither trachea nor bronchi were compressed. A small mass of secondary growth, the size of a Tangerine orange, was found in the lower part of the upper lobe. In addition to the new growth, both lungs showed evident signs of tuberculous disease. Thus near the apex of the right is seen an old cavity with thickened and puckered walls, and with a scarred and retracted surface, while the remainder of the lobe is fibrosed. The lower lobe contains a good deal of recent tubercle commencing to caseate. The left lung also showed extensive tuberculous disease, some old and some recent. O 38

From a man aged 54, who had suffered for some time from chronic pulmonary tuberculosis. The new growth was never suspected, and was found for the first time on the *post-mortem* table. Under the microscope it proved to be a typical lympho-sarcoma, while tubercle bacilli and giant-cells were found in those portions of the lungs affected with tuberculous disease.

- 101 A. This specimen shows the anterior portion of the right lung, the posterior half of which is seen in the preceding specimen. The mass of new growth, which started in the anterior mediastinal glands, as well as the old and recent tuberculosis of the lung, is well seen. O 38

102. The specimen shows the anterior portion of the right lung, in which a large mass of whitish new growth is seen to occupy the position of the bronchial glands from which it had no doubt arisen. Thence it had spread into both the upper and lower lobes. The right bronchus in its upper portion is seen to be invaded by the lympho-sarcoma, while for the rest of its course its walls had been destroyed, and it was merely represented by a channel through the growth. The trachea at its bifurcation, and the left bronchus to a very slight extent, are also invaded by the growth. This was fairly soft to the touch, and on microscopical examination proved to be a typical lympho-sarcoma. In addition to the new growth it should be noticed that the upper lobe shows a fair amount of recent tuberculosis (confirmed by microscopical examination). The lower lobe shows no tubercle, but a small patch of recent broncho-pneumonia. The pleura over the lung showed some loose adhesions, and there was a little fluid at the base. **O 126**

From a woman aged 42, who was admitted two months before death for signs of pleural effusion at the right base. Six weeks later thirty ounces of serous fluid were removed by aspiration, and one week subsequently twenty-six ounces. Two days before death ten ounces of blood-stained fluid were withdrawn. The patient finally died with great dyspnoea. *Post mortem*, the left lung was natural, as also were all the glands except the bronchial. The growth was invading both the pericardium and right auricle; secondary growths were found in both supra-renals and in the left ovary.

103. This specimen shows the posterior portion of the same lung as that preserved in the preceding specimen. The new growth, starting in the bronchial glands and spreading chiefly into the lower lobe of the lung along the direction of the bronchi, is well seen. Posteriorly the large irregular warty growth, forming a mass parallel to the vertebral column, should be especially noticed. **O 126**

For a case of myxo-sarcoma of the pleura see Specimen 198.

TUBERCULOUS DISEASE OF THE LUNGS.

A. ACUTE MILIARY TUBERCULOSIS.

104. The lung shown is studded from apex to base with grey miliary tubercles. Some are also scattered over the pleural surface, which is inflamed and covered in places with recent lymph. **M 38**

From a boy aged 10, who died of general tuberculosis, with miliary tubercles in the lungs, pleuræ, liver, and kidneys, secondary to caseation of the bronchial glands.

- 104 A. This specimen shows the upper lobe of the right lung deeply engorged with blood, and closely studded throughout with pale grey semi-translucent miliary tubercles. **M 148**

From a man aged 22, who died of general tuberculosis. Recent miliary tubercles were found in both lungs, in the kidneys, and in the meninges of the brain. An old tuberculous focus was present in the left lung.

Occurring as a Terminal Event in Cases of Chronic Pulmonary Tuberculosis.

105. This specimen shows the lower lobe of the right lung. The apex is honeycombed with small cavities of some little standing, while the remainder of the lobe is thickly studded with recent miliary tubercles.

I 180

From a woman aged 22, who died of chronic phthisis, terminated by acute miliary tuberculosis of the lungs and kidneys.

106. In this specimen the upper lobe is greatly contracted, and surrounded by thickened pleura, and consists almost entirely of an old contracted cavity. The lower lobe is filled from apex to base by recent, grey, racemose and miliary tubercles, which, however, in some places show pigmentation. At the extreme apex there is a caseous nodule the size of a bean, while a similar but smaller nodule can be seen anteriorly.

N 13

From a man aged 42, who suffered from chronic pulmonary tuberculosis. *Post mortem* tuberculous lesions were found also in the tongue, larynx, and intestines.

107. The specimen shows the posterior part of the right lower lobe crowded with miliary tubercles.

N 238

From a man aged 21, who suffered from chronic pulmonary tuberculosis, with tuberculous ulceration of the intestines. At the autopsy tuberculous disease of older date was found at the left apex, but with this exception the whole of both lungs were thickly studded with miliary tubercles similar in appearance to those seen in the specimen. Miliary tubercles were also found in the liver and kidney.

108. The specimen shows the posterior half of both right and left lungs. Both are studded with recent miliary tubercles, which in the upper part of the right lung are aggregated together into definite racemose masses. The tubercles, whether separate or aggregated together, seem to be of very similar age. A fairly recent cavity, visible at the left apex, is the only evidence of earlier disease in either lung.

N 208

From a man aged 22, who suffered from chronic pulmonary tuberculosis and tuberculous ulceration of intestine. No miliary tubercles were found in any other organs after death except the lungs, and it is possible therefore, bearing in mind also the indication of racemose arrangement in the right lung, that the miliary tubercles in this case were the result of an inhalation process, and *not* a blood infection.

B. ACUTE CASEOUS TUBERCULOSIS.**(1) Lobar Type (Caseous Pneumonia).**

109. This specimen shows a section of lung, the lower two-thirds of which has been converted into a solid caseous mass of a deep yellow colour and of the consistency of cheese. At the apex and upper part of the upper lobe individual areas of caseating tubercle, with a typical

racemose outline, can be made out. In places these have broken down and formed very small cavities. **I 211**

From a man aged 21, who died of acute caseous pulmonary tuberculosis (probably engrafted upon earlier disease), the symptoms of which had lasted seven weeks.

110. This specimen shows both lungs opened. The right upper lobe is in a condition of total excavation, and the destructive process has also spread to the upper part of the lower lobe. The cavity is lined with shreddy necrotic tissue, and is the result of an extremely rapid process. Numerous unsupported vessels cross the cavity, but all are thrombosed. The lower part of the right lower lobe and the whole left lung are in a condition of consolidation (caseous pneumonia), yellow tubercle of a cheesy consistency replacing the normal lung tissue.

An old specimen to which no reference can be found.

(2) Broncho-pneumonic Type.

111. This specimen shows the lung uniformly infiltrated with small caseating areas of tubercle. No softening has as yet occurred. **K 55**

From a woman aged 32, who died of acute pulmonary tuberculosis.

112. The sections which have been made through both right and left lungs show them to be studded from apex to base with irregular nodules of caseating tubercle, varying in size from a millet-seed to that of a large split pea. In the recent state they were of a deep yellow colour. Many of these areas of tuberculous broncho-pneumonia can be seen on the surface of the lung, showing through the pleura. **K 82**

From a little girl aged 5, who died of acute caseous tuberculosis of the lungs, with tuberculous lesions in the meninges of the brain, heart (Specimen 222), spleen (Specimen 390), liver, kidneys, peritoneum, and pleura. Many of the glands were caseous. Her acute illness lasted only eleven weeks.

113. This specimen shows a section through the right lung. The upper lobe shows two cavities near its outer wall, while three recent ones are also seen near the apex of the lower lobe. The remainder of the upper lobe, and the upper third of the lower lobe, are practically solidified by large caseating masses of tuberculous broncho-pneumonia. Some of these were commencing to soften. Scattered tubercles in a condition of caseation are also to be seen in the remainder of the lower lobe. **N 181**

From a youth aged 19, who was in perfect health until four and a half months before his death, when he "caught cold." His temperature in the hospital was markedly inverse. At the *post-mortem* the intestines also showed tuberculous ulceration, but the other organs were free from disease.

114. The specimen shows the posterior part of the left lung, in which large masses of caseating tuberculous broncho-pneumonia are visible. At the upper part of the lung these have united and are softening, and
B.H.C.

cavities have already here formed or are in process of formation. In the lower portion of the lung softening is only just commencing.

N 199

From a boy aged 18, whose illness commenced suddenly through "getting wet through" five months before death. *Post mortem*, besides the disease of the lungs (the right lung was in a very similar though not so advanced a condition as the left), the lower dorsal and sacral vertebræ were found carious, and a right psoas abscess was present. There was also thrombosis of the left external iliac vein. The patient never complained of pain in region of the abscess, and there were no clinical signs of it during life. Whether, therefore, the vertebral caries existed before the commencement of the pulmonary disease, or whether the latter was primary, could not be stated with certainty.

115. This specimen shows the anterior half of the left lung. The upper lobe is riddled with irregular cavities of recent date, which intercommunicate with each other. These have been formed by the softening of the caseating material, portions of which are still seen between the cavities. The lower lobe is in an earlier stage, and is studded with areas of caseating tubercle. The right lung showed similar lesions, but not so advanced as those in the left.

O 98

From a man aged 18, who "caught cold" three months before death. The disease extended rapidly, and patient died one week after admission.

See also No. 169.

c. FIBRO-CASEOUS TUBERCULOSIS.

(1) Showing Racemose Tubercles.

116. The specimen shows a section through the right lung. Numerous recent racemose tubercles, with pigmented centres and caseating circumferences, are seen affecting the central portions of the upper and lower lobes, a shell of practically unaffected lung tissue about two-thirds of an inch thick separating them from the pleural surface. The specimen explains how in some cases extensive tuberculous disease of the lung may be present and yet the physical signs may be scanty or altogether absent.

N 212

From a man aged 34, who suffered from chronic pulmonary tuberculosis, and tuberculous ulceration of trachea, great bronchi, and intestines. In the left lung extensive excavation was also present. The larynx was unaffected.

117. The specimen shows the posterior portion of the left lung. The upper lobe is seen to contain a large cavity. The lower lobe is very thickly studded with recent racemose tubercles, for the most part just commencing to caseate; these are most numerous in the upper part of the lobe, where they have practically solidified the lung tissue. At the base they are more discrete.

N 149

From a youth aged 19, who suffered from chronic pulmonary tuberculosis with tuberculous ulceration of the intestines.

(2) Showing Cavities.

118. The specimen consists of the posterior portion of the right lung. Cavities, smooth-walled and evidently of some considerable standing, are seen in the upper portions of both upper and lower lobes. The whole of the remainder of the lung is thickly studded with recent caseating miliary and racemose tubercle. **N 250**

From a man aged 20, whose illness had commenced with hæmophysis two years before death. *Post mortem*, tuberculous disease of the posterior part of the tongue, pharynx, larynx (Specimen No. 48), and intestines was found.

119. The specimen shows the posterior part of the left lung. A large cavity (comparatively smooth-walled) is seen in the upper lobe, and a smaller one, with smooth walls and of some standing, in the lower lobe. The latter is surrounded in part by greyish semi-transparent matter, containing points of caseation, *i. e.* tuberculous matter taking on for the most part fibroid change. **O 11**

From the same patient as No. 138, for which see history.

120. The specimen shows the anterior part of the left lung. It is seen to be much shrunk, and measures only five by two and a half inches. The upper lobe is converted into a large cavity, contracting and lined by false membrane, and surrounded by pleura one quarter of an inch thick. The lower lobe also is much excavated, the cavities being divided up irregularly by trabeculæ. At the base of the lung some fibrosed remains of lung tissue persist. The branch of the pulmonary artery to this lung is filled with recent *ante-mortem* clot. **O 40**

From a male patient aged 24, whose disease may possibly have started with influenza four years before death. The day before he died he was seized with sudden and severe pain in the right side, with great dyspnoea.

121. The specimen shows the anterior half of the left lung. The upper lobe is considerably shrunk, and completely converted into a cavity three and a half inches long by two inches broad. It is completely lined by false membrane, and is evidently of considerable standing. The pleura over it was thickened and densely adherent. A large cavity of similar date stretched downwards from the apex of the lower lobe parallel to the great fissure of the lung. Both cavities are somewhat shrunk. A little recent tubercle is seen in the lower portion of this lobe. **N 216**

From a man aged 44, who had been ailing since influenza five years before death. *Post mortem*, in addition to the old disease shown in the specimen, a good deal of recent tubercle was found in the right lung, which was considerably hypertrophied. Tuberculous disease of the right epididymis was also present.

122. The specimen shows the anterior part of the right lung. The upper lobe is seen to be almost completely converted into one large irregular cavity, crossed by bridges, the whole having a greenish appearance. The process had evidently been very rapid, although there was no sign of gangrene. Recent tubercles are seen in the lower lobe. **N 251**

From a man aged 35, who died of chronic pulmonary tuberculosis, with tuberculous lesions in the larynx, trachea, bronchi, and intestines.

(3) **Showing Total Excavation.**(a) *Of Upper Lobe.*

124. The specimen shows the anterior portion of the left lung. The whole of the upper lobe has been converted into one large cavity, the walls of which are formed of little more than pleura, which is hardly at all thickened. The lower lobe is thickly studded with recent caseating racemose tubercle. The right lung showed a recent cavity in both upper and lower lobes, together with much caseating tubercle. **O 6**

From a man aged 32, who had had a cough for four years before death. *Post mortem*, tuberculosis of the larynx, trachea, and great bronchi was found, in addition to the disease in the lungs.

125. This specimen shows the whole left upper lobe represented by a huge cavity with caseous lining. The lower lobe is broken up into large irregular cavities, the intervening lung being densely infiltrated with friable caseous masses. **D 197**

From a woman aged 28, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

(b) *Of the Whole Lung.*

126. The left lung is seen to be converted into a thin-walled bag, intersected by ragged pigmented bands and shreds of lung tissue. Bronchi open freely into the large, imperfectly loculated cavity. At the base of the lower lobe is a small amount of indurated lung tissue, studded with caseating nodules. **D 85**

From a woman aged 37, who died of pulmonary tuberculosis of fourteen months' duration with lardaceous disease.

127. The upper lobe of the left lung and the upper part of the lower lobe are represented by a thin shell composed of thickened pleura, with irregular stumps of trabeculæ. The remainder of the lower lobe consists of a series of trabeculated cavities bounded at the extreme base by a small zone of condensed lung infiltrated with many caseous and a few pigmented nodules. **F 129**

From a woman aged 33, the subject of chronic pulmonary tuberculosis of eighteen months' duration. The physical signs were those of a large excavation, and towards the close of a pneumothorax.

128. This specimen shows the whole of the right lung totally excavated. The walls are corrugated with remains of trabeculæ, and across the cavity run fibrous bands. **L 37**

From a woman aged 19, who died of chronic pulmonary tuberculosis of three and a half years' duration.

129. This specimen shows the left lung represented by a thin-walled single cavity, with walls of little more than thickened pleura. The remains of the trabeculæ are seen as flattened, thickened ridges and nodules. Small bronchi open freely into the cavity. **E 164**

From a woman aged 27, who died of chronic pulmonary tuberculosis of three years' duration, with tuberculous lesions in the intestines and amyloid disease.

130. This specimen shows wholesale excavation of both lobes of the lung. Many fibrous trabeculae cross the cavities, and the orifices of the bronchial tubes are ulcerated.

An old specimen of which there is no further record.

See also Nos. 162, 258.

(4) **Showing Pigmentation.**

131. The specimen shows a section of the right lung. The upper lobe and upper half of the lower lobe are rendered solid from tuberculous deposits, which have undergone fibroid change with much pigmentation. Small areas of caseation are seen in places, with a few minute cavities.

M 226

From a man aged 44, who died of chronic pulmonary tuberculosis, with extensive tuberculous ulceration of the larynx.

132. This specimen shows a deeply pigmented and fibrosed lung, the changes being most marked in the upper portion of the organ. There is an old cavity near the axillary border of the apex, and in this lobe a large development of fibrous tissue, some in the form of thickened interlobular septa, and some as general peribronchial and interstitial thickening. Similar though less marked changes are seen in the upper part of the lower lobe. Scattered throughout the lung are numerous small tuberculous deposits.

I 117

From a man aged 60, who died with chronic pulmonary tuberculosis, cirrhosis of the liver, and granular kidneys.

- 132A. The specimen shows the apex of the left lung. It is contracted, greatly fibrosed, and deeply pigmented, being in places of a coal-black colour. A few fibro-caseous tubercles can be seen scattered throughout it.

C 99

From a man aged 37, who had suffered from cough for three years, and was found *post mortem* to have chronic pulmonary tuberculosis, emphysema, and granular kidneys.

133. The specimen shows a section through the right lung. Numerous deeply pigmented tubercles are seen scattered throughout the upper lobe, and through the upper part of the lower lobe. The lung also contained three small cavities, two in the upper lobe and one in the lower lobe.

N 209

From a man aged 43, who suffered from chronic pulmonary tuberculosis, with tuberculous ulceration of the larynx and intestines. The left lung showed total excavation of the upper lobe and a large cavity in the apex of lower lobe, and scattered throughout the latter much recent tubercle with surrounding pseudo-lobar broncho-pneumonia.

(5) Showing Tubercles undergoing Fibro-caseous or Calcareous Change.

134. Near the border of the portion of pigmented lung shown, two small fibro-caseous nodules, the size of a small pea, can be seen. **L 106**

From a woman aged 20, who died of chronic pulmonary tuberculosis.

135. This specimen shows a section of a deeply pigmented fibroid lung. In it are many caseous masses surrounded by fibrous tissue; in places this caseous material has undergone calcareous change.

An old specimen of which there is no further record.

136. This specimen shows a section of a deeply pigmented and fibroid lung in which there are mortar-like deposits of calcareous material.

An old specimen of which there is no further record.

137. The specimen shows the posterior portion of the left lung. The upper lobe is shrunk and contains much fibrotic tissue, scattered throughout which are several small calcareous patches, and also some caseating areas. The lower lobe shows scattered patches of caseating tubercle, with some fibrosis and pigmentation in the upper part of the lobe. **N 245**

From a woman aged 31, who had suffered for five years from chronic pulmonary tuberculosis. *Post mortem*, tuberculous ulceration of the intestine was also found.

138. The specimen shows the posterior portion of the right lung. The upper lobe shows numerous patches of caseation scattered throughout it, and partly surrounded by greyish semi-translucent areas of tubercle which have undergone fibroid degeneration. The lower lobe also shows scattered areas of caseation, but the most prominent objects are semi-translucent greyish areas, firm to the touch, of the size of a sixpenny piece, and having an irregular outline and showing dots of caseation. These are evidently areas of racemose tubercle which have united and for the most part undergone fibroid change. The left lung showed similar changes and two large cavities. **O 11**

From a boy aged 11, who died with chronic pulmonary tuberculosis, tuberculous ulceration of the intestines, and adhesive tuberculous peritonitis.

From the same patient as No. 119.

(6) Showing the Formation of Thickened Pleura.

139. The specimen shows a section through the left lung. The upper lobe is markedly shrunk, and shows advanced pulmonary tuberculosis. Over it the pleural layers are seen to be considerably separated in places, the space thus left being filled with gelatinous semi-translucent material. The membrane itself is as yet hardly at all thickened. **N 173**

From a boy aged 17, who died of chronic pulmonary tuberculosis with terminal miliary tuberculosis of lungs and kidneys, and with tuberculous lesions in the larynx and intestines.

140. The specimen shows a section through the right lung. Considerable fibrosis and shrinking of the organ is shown, and as a result the pleural layers are separated, the intervening space being filled with gelatinous material. The specimen illustrates the formation of thickened pleura. **N 186**

From a man aged 23, who died with chronic pulmonary tuberculosis and mitral regurgitation. Tuberculous ulceration of the intestines was also found *post mortem*.

(7) **Showing Thickened Pleura and Fibrosis of Lung.**

141. This specimen shows the left lung everywhere greatly contracted and covered by markedly thickened pleura. A large cavity surrounded by dense fibroid tissue occupies the upper lobe, a thin pigmented line between this and the pleura representing the only trace of lung tissue. The lower lobe is also excavated, and the portions of lung tissue remaining are fibrosed and deeply pigmented. **I 143**

From a man aged 48, who died of chronic pulmonary tuberculosis and lardaceous disease.

142. The specimen shows a greatly contracted right lung, with the pleura and interlobar septa much thickened. The lung tissue throughout is much fibrosed and pigmented, and a contracting cavity is present in both upper and lower lobes. **M 144**

From a man aged 39, who died with chronic pulmonary tuberculosis of two years' duration. There were tuberculous lesions in the larynx and intestines, the heart was dilated, and the abdominal cavity full of fluid.

143. At the apex of the right lung several small cavities are seen, the surrounding lung tissue being fibrosed and the pleura nearly three quarters of an inch thick. **B 183**

From a male patient who suffered from pulmonary tuberculosis of a very chronic type. (The specimen is figured in *Diseases of the Lungs*, Fowler & Godlee, London, 1898, p. 579.)

144. The specimen shows the upper part of the right lung. At the apex the pleura is extremely thick, and contains in its deeper portion a band of cartilage two inches long and one third of an inch thick. The lung shows several small contracted cavities, and is also deeply pigmented. **L 202**

From a man aged 45, who had suffered from pulmonary tuberculosis for twenty years.

145. This specimen shows a tuberculous right lung cut in two and laid open. The two layers of pleura, especially over the lower lobe, are greatly thickened and adherent. The parietal layer was also densely adherent to the chest wall. **K 148**

From a man aged 48, who died of chronic pulmonary tuberculosis, with tuberculous lesions in the larynx and trachea.

146. This specimen shows a section through the right lung. The pleura is thickened, and the interlobar septa represented by dense white

fibrous bands. Similar bands intersect the whole lung, especially along the course of the bronchi. The lung tissue is in a condition of consolidation, being tough, pigmented, and infiltrated with tubercle. Small cavities are scattered throughout the lung, and in the neighbourhood of the bronchi are several calcareous nodules surrounded with fibrous tissue.

I 70

From a female aged 18, who died of chronic pulmonary tuberculosis, with lardaceous disease of the liver, spleen, kidneys, and intestines.

147 and 148. These two small specimens show portions of pigmented fibrous lung tissue covered by dense, greatly thickened pleura.

149. The specimen shows the left lung. It is much diminished in size, measuring six inches in length by three inches in breadth, and weighed with the whole of the pleura and some of the diaphragm attached, twenty and a half ounces. There is a cavity in the upper lobe communicating with a larger one in the lower lobe. The remainder of the lung substance is much fibrosed, and formed at the root of the lung a mass three inches long by two inches broad. Over the lung the pleura is densely adherent and greatly thickened, while below the contracted lung the thickened layers were adherent to each other.

O 57

From a man aged 30, who died from chronic pulmonary tuberculosis, stating that his illness began with cough two years only before his death. As the result of the great contraction of the left lung the heart was much drawn over. The right lung was markedly hypertrophied, and to a slight extent emphysematous. The hypertrophy affected chiefly the middle lobe, which almost completely covered the heart, though the apex-beat was in the anterior axillary line. The right lung showed also old and recent tuberculous disease. It should be noticed that in spite of the great contraction of the left lung the left side of the chest had not fallen in to any considerable extent, owing to the compensatory hypertrophy of the right lung.

For another specimen showing greatly thickened pleura see No. 280.

(8) Showing Fibrosis of the Lung and Contracting Cavities.

150. In this specimen the pleura is enormously thickened, sending fibrous bands into the lung substance, which is fibrosed, pigmented, and contains several old contracted cavities with thick fibrous walls. There is also considerable peribronchial thickening.

An old specimen of which there is no further record.

151. The specimen shows a section of a greatly shrunk lung. The pleura is much thickened, and the lung tissue replaced by dense fibrous tissue, in which are old contracted cavities.

152. This specimen shows a piece of the upper lobe laid open. The lung is deeply pigmented and fibrous, the fibrous tissue being arranged concentrically around old contracted cavities. A few fibroid grey tubercles can be seen.

K 1

From a woman aged 54, who died of chronic pulmonary tuberculosis.

153. This specimen shows a section through a greatly contracted lung, in which the pleura and interlobar septa are greatly thickened. The lung tissue is fibroid and densely pigmented, and contains two large, smooth-walled, contracting cavities.

An old specimen of which there is no further record.

154. This specimen shows an old cavity, with puckered and quite smooth walls. The lung tissue is fibrosed and deeply pigmented, and the pleura somewhat thickened.

From a woman aged 58, whose case was shown at the Clinical Society by Dr. Theodore Williams. See Clinical Society's *Transactions*, vol. v, p. 27, and vol. x, p. 27. The cavity had probably formed five years before death, and then contracted, at first rapidly, afterwards more slowly.

155. The specimen shows the posterior portion of the upper half of the left lung. The upper lobe, much shrunk, fibrosed, and pigmented, is surrounded by greatly thickened pleura, which had to be cut at the apex of the lobe to enable the lung to be extracted. A small contracting cavity is seen at the apex. **O 101**

From a male patient aged 41, who was in this hospital seven years before his death, and whose illness had probably begun shortly before this date.

156. The specimen shows the posterior portion of the right lung. The upper lobe contains a cavity the size of a marble, the edges of which are somewhat thickened; the remainder of the lobe is fibrosed, and shows some grey tubercles scattered throughout it. The lower lobe shows in its upper part a cavity the size of a Tangerine orange; its walls are evidently thickened and beginning to contract. A little recent tubercle is seen in the remainder of the lobe. The left lung showed in its upper lobe some old disease, but practically no recent extension. **O 47**

From a man aged 37, who died from acute bronchitis, brought on by dense November fogs.

(9) Showing Caseation of the Bronchial Glands.

157. The specimen shows the posterior portion of the right lung. Cavities of some little standing are seen both in the upper lobe and in upper part of the lower lobe, the remainder of the latter being rendered almost solid by very numerous coalescing masses of caseating racemose tubercle. The pleura, which was adherent all over the lung, shows marked tuberculous infiltration. It presents an appearance suggesting marble, large, yellowish-white, irregular areas standing out upon a reddish background. The yellowish patches are areas of caseating tubercle placed between the two adherent layers of the pleura. They vary in size from a pin's head to that of half a crown. The lung under them is not specially affected. The bronchial and tracheal glands are markedly enlarged and filled with caseating masses; the cervical glands on both sides, and also the mesenteric glands, were in a similar condition. **N 183**

From a patient aged 19, who died from chronic pulmonary tuberculosis,

with terminal miliary tuberculosis of the left lung and kidney. *Post mortem* tuberculous ulceration of the larynx and intestines was also found.

(10) **Showing surrounding Broncho-pneumonia and Disease at the very base of the Lung.**

158. The specimen consists of the anterior portion of the left lung. Numerous racemose tubercles in a stage of caseation and softening are seen, together with wide-spread surrounding broncho-pneumonia; the latter, indeed, was so extensive that the lung had been rendered quite solid, and sank in water. Another point of interest in the specimen is the presence of the large area of caseating tubercle immediately above the diaphragm.

O 39

From a girl aged 19, who suffered from chronic pulmonary tuberculosis, with tuberculous ulceration of the intestines. The autopsy showed also a few recent vegetations on the mitral valve, which had allowed a little regurgitation during life.

D. **ARRESTED PULMONARY TUBERCULOSIS.**

159. This specimen shows the upper part of the right lung. Near the apex there is a patch of old arrested tubercle, consisting of a small fibro-caseous area surrounded by a zone of fibrous tissue. It is an example of arrested pulmonary tuberculosis, and was probably associated with a pleural effusion (half a pint of serous fluid being withdrawn by aspiration) from which the patient had suffered ten years before death.

O 178

From a man aged 45, who died with an empyema of the right side rupturing into the bronchus, and causing a broncho-oesophageal fistula.

160. The specimen shows the posterior portion of the left lung. The upper lobe is seen to be considerably contracted, and converted into a dense fibroid, partly pigmented mass containing one or two very small cavities, in one of which a little calcareous material was found. No recent tuberculous disease is seen. The right lung also showed arrested disease—in the upper lobe a contracted cavity the size of a filbert, surrounded by fibrosis; and in the lower lobe some scattered pigmented tubercles of old standing, together with a small calcareous patch at the apex.

O 85

From a man aged 51, who died from acute bronchitis complicated with aortic regurgitation and extensive atheroma of the aorta. The tubercle had undergone complete arrest.

161. This specimen shows at the apex of the left lung a large cavity with smooth walls composed of dense fibrous tissue, occupying half the upper lobe, and covered with thick, adherent pleura. The surrounding lung tissue is somewhat indurated, pigmented, and contracted. There was no evidence of recent tubercle.

I 112

From a man aged 39, who died of typhoid fever.

162. The specimen shows a vertical section through the left lung. The

whole of this lung is now represented by a cavity three inches long by two inches broad, filled, when first cut open, with reddish purulent matter. The pleura around is greatly thickened. The two main divisions of the left bronchus open directly into the cavity, and through them glass rods have been passed, thus proving that this contracted cavity represents really the whole of the left lung. The right lung was hypertrophied and emphysematous, and showed evidence of old tuberculous disease. **N 207**

From a boy aged 18, who was admitted into the hospital suffering from acute bronchitis, and died of the same four days later. The left side of patient's chest was greatly fallen in, and the heart was much drawn over to accommodate itself to the extreme shrinking of the lung. *Post-mortem* evidence of acute bronchitis was found, but none of active tuberculous disease; thus complete arrest of the pulmonary tuberculosis seemed to have taken place.

E. CHRONIC PULMONARY TUBERCULOSIS IN ASSOCIATION WITH EMPHYSEMA.

163. This specimen shows compensatory emphysema in a tuberculous lung. At the apex there is a contracting cavity, below which only a very few tuberculous deposits, white in colour and the size of a pin's head, can be seen. The lung tissue is emphysematous, the small distended alveoli appearing brown in colour. **K 176**

From a man who died of chronic pulmonary tuberculosis.

164. This specimen shows a section of the upper part of the right lung. The lung tissue is deeply pigmented, contains fibro-caseous masses, and in places is very emphysematous, the distended alveoli being plainly visible. **K 186**

From a man aged 40, who died of pulmonary tuberculosis, with cirrhosis of the liver.

165. At the apex of the lung is a large bladder-like projection the size of an orange, thought to be a large emphysematous bulla. The lung tissue generally is deeply pigmented, and contains scattered fibroid tubercles. **I 62**

From a man aged 38, who died of pulmonary tuberculosis, with a pneumothorax on the right side.

166. This specimen shows marked emphysema. The individual alveoli are distended, and in places several have united to form small cavities. Scattered throughout the lung are patches of fibro-caseous tubercle.

No reference can be found to this specimen.

SECTION V.

DISEASES OF THE PLEURÆ.

INFLAMMATION OF PLEURA.**(1) Acute Sero-fibrinous Pleurisy.***(a) Complicating Chronic Pulmonary Tuberculosis.*

168. The lung shows a good deal of recent tuberculous disease, for the most part of a racemose character, and commencing to caseate. The pleura is adherent over the upper lobe, and is considerably thickened. Over the lower lobe the two layers are widely separated from each other, the intervening space having been occupied during life by about a pint and a half of clear serous fluid. The pleural surfaces in this situation are covered with recent lymph, and several bands of organised lymph cross the space from side to side. No actual tubercles can be seen here on the pleural surfaces, but at the very apex of the effusion, not far from where the pleuræ became adherent, the tuberculous invasion of the serous membrane is clearly seen. N 185

From a labourer aged 44, who died with somewhat extensive pulmonary tuberculosis affecting both lungs.

(b) Accompanied by Acute Caseous Tuberculosis.

169. This specimen shows a section through the lung and pleura. The latter is much thickened, and converted into a layer of yellow caseating tuberculous material. The interlobar septum is in a similar condition, and at the base the pleural layers were separated by an effusion. The base of the upper lobe of the lung is solid and in a condition of acute caseous tuberculosis. I 183

From a girl aged 19, the subject of old tuberculous hip disease, who died with acute tuberculous sero-fibrinous pleurisy with terminal caseous bronchopneumonia.

(2) Chronic Sero-fibrinous Pleurisy complicating Chronic Pulmonary Tuberculosis.

170. This specimen shows a section of the right lung. The pleura is greatly thickened, being from a quarter to half an inch thick. A localised effusion was present at the base, with thick buttery lymph lining the indurated pleura. K 71

From a man aged 48, who died with chronic pulmonary tuberculosis. On the left side there was acute tuberculous pleurisy showing miliary tubercles, and on the right the chronic sero-fibrinous pleurisy seen in the specimen.

171. The lower part of the right lung with the pleura covering it are shown. Both layers of pleura are greatly thickened, especially the parietal, which is densely adherent to the costal wall. The visceral

layer is also much thickened. There is a small space between the two layers, which contained sero-fibrinous fluid. K 162

From a man aged 45, who died of chronic pulmonary tuberculosis. On the left side there was recent pleurisy.

(3) Suppurative Pleurisy or Empyema.

172. This specimen shows the heart and right lung of a small child. The lung is collapsed and pushed forwards by an empyema, which is situated at its posterior and lower aspect.

An old specimen of which there is no further record.

173. This specimen shows the thorax with part of the thoracic wall removed on the left side in order to demonstrate the position and extent of an empyema. Portions of the second, third, fourth, and fifth ribs have been removed in the axillary region, showing the cavity of the empyema lined with thickened pleura. The external openings which penetrate the cavity mark the site of drainage-tubes inserted during life. The lung can be seen compressed at the upper and inner portion of the space exposed.

An old specimen of which there is no further record.

Complicating Chronic Pulmonary Tuberculosis.

174. The specimen shows the posterior portion of the right lung, which is greatly collapsed (five inches by three and a half inches) and the seat of extensive old tuberculous disease. The upper lobe contains a large cavity of some standing, and two or three smaller ones are seen in the lower lobe, the remainder of which is collapsed and contains tubercle, some grey and some caseating, but showing no signs of activity. The pleura over the whole lung is thickened, and over the upper two-thirds adherent. At the base of the lung an empyema of some standing was present, one and a quarter pints of sweet pus being evacuated at the autopsy. O 37

From a man aged 39, whose illness began two years before death with hæmoptysis. Shortly before death he was operated upon for a small costal abscess over the fourth rib anteriorly (see Specimen 200), but the empyema was not suspected during life.

Limited to the Apex of the Lung.

175. The specimen shows the anterior part of the right lung. The pleura is here seen to be densely adherent and greatly thickened, reaching at its maximum one third of an inch. This thickening was the result of the empyema which had been opened during life by the removal of the second costal cartilage. The cavity has now somewhat retracted, and is represented by a channel running from the apex of the lung almost to the sixth rib anteriorly, just to the right of the sternum. On turning the specimen round, some dilation of the bronchi in the lower lobe is observed, but this was much more marked in the posterior half of the lung. The bronchi in the upper and middle lobes

were natural. The walls of the dilated bronchi were inflamed and a little ulcerated. N 204

From a female patient aged 27, who eventually died with purulent meningitis and cerebellar abscess. The sequence of events was not quite obvious, the history being obscure. Undoubtedly the bronchiectasis must have been of some standing, and with little doubt the meningitis and cerebellar abscess were secondary to it, but what relation (if any) the empyema bore to the bronchiectasis was not clear.

Secondary to Abscess of the Liver.

176. This specimen shows a liver abscess which has perforated the diaphragm, giving rise to an empyema. The pleuræ of the right side are adherent above, but below are separated by an abscess cavity the size of an orange, which does not communicate with the lung, but a sinus leads down through the diaphragm into the abscess in the liver. The nature of the abscess could not be determined; the liver has the appearance of actinomycosis, but there was no evidence microscopically either of that disease or of tubercle, although giant-cells were found. I 15

From a girl aged 15, who, without any history of previous illness, became suddenly ill nine weeks before death, and died in an extremely emaciated condition. There was dulness at the right base, and an empyema was opened in the usual way six weeks before death.

PERFORATION OF PLEURA.

(1) Showing Adhesion of surrounding Pleura and Absence of Pneumothorax.

178. This specimen shows portions of the posterior parts of the third, fourth, and fifth ribs, with the muscles and pleuræ still attached. At one spot over the fourth rib the adherent pleural layers are seen to be ulcerated through, laying bare the rib over an area the size of a three-penny piece. The ulceration had resulted from the extension of a cavity in the right upper lobe. No pneumothorax resulted, owing to the adhesion of the pleural surfaces. K 26

From a woman aged 48, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

179. This specimen shows the cavity in the lung referred to in the preceding specimen (No. 178). K 26

180. On the posterior surface of the left upper lobe there is a perforation in the pleura the size of a goose-quill, but owing to the adhesions over this lobe no pneumothorax resulted. In the mid-axillary line near the posterior portion of the lower lobe there is, however, a second hole also the size of a goose-quill in the pleura, communicating with a small cavity in the lung. This had given rise to a pneumothorax, which, owing to the adhesions above referred to, remained limited to the lower lobe. M 203

From a man aged 27, who suffered from chronic pulmonary tuberculosis. There was no history of the onset of the pneumothorax.

181. This specimen shows a section of the right lung, the upper lobe of which is converted into numerous irregular communicating cavities. The lower lobe is filled with caseating patches, some of which have commenced to soften. One of the cavities in the upper lobe communicates with a hole in the pleura near the apex of the lung, but as both layers of the pleura were adherent no pneumothorax resulted. A white glass rod shows the connection between the hole in the pleura and the interior of the lung. **O 99**

From a man aged 21, who died of caseous pulmonary tuberculosis with tuberculous lesions in the larynx. One hundred and seventy-one stones were also found in the right kidney (see specimen No. 400).

(2) Resulting in Pneumothorax.

(a) Showing Nature of Opening and Condition of Lung.

182. In this specimen two holes in the pleura, each the size of a pea, communicating with a cavity in the lung, can be seen close together just under the upper margin of the lower lobe. The visceral layer of the pleura is thickened and somewhat shaggy.

An old specimen of which there is no further record.

183. This specimen shows ulceration of the thickened pleura extending over an area the size of a crown. Over the upper part of the area the membrane has not yet given way, but over the lower half it is completely necrosed and shreddy lung tissue is exposed, numerous free communications between the left lung and the pleural cavity being thus established. **L 241**

From a man aged 28, who died of chronic pulmonary tuberculosis with tuberculous lesions of the larynx and intestines. The pneumothorax occurred suddenly three months before death.

184. The specimen shows the posterior half of the lower lobe of the left lung. The section shows recent tuberculous disease of the lung, with marked caseation and softening. At a point two inches below the apex of the lower lobe the pleura has ruptured. This has taken place by a hole (accidentally enlarged after death) capable of admitting a small probe, and situated within an area of about the size of a three-penny piece, where the pleura was extremely thin and evidently necrotic. The pleural cavity contained air and three ounces of clear serous fluid. **N 182**

From a patient aged 16, who died from acute pulmonary tuberculosis, with a history of only four months' duration. In addition to the disease of the lungs, tuberculous ulceration of the intestines, larynx, and trachea was also found after death.

185. The specimen shows the anterior portion of the right lung. The pleura is seen to be adherent over the upper lobe, but over the middle and lower lobe there are no adhesions, and a pneumothorax has occurred. The opening in the pleura, about the size of a threepenny piece, is situated in the lower lobe on its anterior surface, one inch from the

lower border of the lung and the same distance from the anterior axillary line. Several other points, both in the lower and middle lobes, are seen to be on the point of rupturing (and one of these, just at the junction of the middle and lower lobes, has been ruptured by accident after death). The surface of the visceral pleura has the usual mother-of-pearl lustre. On section the lung is seen to be almost solidified with extensive tuberculous disease of a caseating racemose type, with some softening in parts.

O 130

From a girl aged 19, who died with chronic pulmonary tuberculosis and tuberculous enteritis. The pneumothorax was discovered on examining the chest six days before death. There were no symptoms accompanying its onset.

186. This specimen shows the left lung cut open. At the apex of the lower lobe can be seen an old irregular cavity which has ulcerated through the visceral pleura by a hole the size of the tip of the forefinger, causing a pneumothorax. The visceral pleura is considerably thickened.

I 250

From a man aged 27, who died of chronic pulmonary tuberculosis with tuberculous pericarditis and tuberculous lesions in the kidneys.

187. This specimen shows a contracted left lung. The upper lobe is entirely excavated, and over it the pleuræ were adherent. Below, the layers were separated, and contained between them air and pus. At the apex of the upper lobe is a small triangular cavity, with which communicates the opening in the pleura. The parietal pleura is considerably thickened.

M 185

From a girl aged 26, who died of pulmonary tuberculosis with tuberculous lesions in larynx, intestines, and generative organs. The onset of the pneumothorax was sudden, ten days before death.

188. The specimen shows the right lung of a patient in whom a pneumothorax had occurred four and half months before death. The lung is seen to be extremely contracted, measuring vertically five inches, and two and a half inches from side to side. It lay close to the spinal column, but extended as high as the clavicle, where it was fixed by adhesions. The hole in the pleura which gave rise to the pneumothorax is situated at the apex of the lower lobe posteriorly, and is indicated by a white rod. It is the size of a small pea, and was partially surrounded by adhesions, as though nature had attempted, though unsuccessfully, to effect a cure. It communicated with a small cavity in the apex of the lower lobe of the lung. The lung shows throughout its whole extent a good deal of tuberculosis, though without any signs of recent activity. The left lung, on the contrary, showed throughout both lobes much recent tubercle, which was progressing rapidly. The right pleura, in addition to the air, contained also three and a half pints of greenish sero-purulent fluid.

O 52

From a woman aged 27, who suffered from chronic pulmonary tuberculosis and tuberculous ulceration of the large intestine. The pneumothorax had developed four and a half months before death.

(b) Showing a Hydro-pneumothorax limited to the Anterior Surface of the Lung.

189. The specimen shows the anterior portion of the left lung. The pleura is seen to be adherent at the apex, the adhesions extending to just below the clavicles. Posteriorly the whole of the lung was adherent to the parietal pleura; the adhesions extending laterally to midway between the middle and posterior axillary line. Over the whole of the anterior surface of the lung, except at the apex, the pleural layers are separated, and a hydro-pneumothorax (clear serous fluid) and air existed. The opening from the lung into the pleura is seen on the anterior surface of the upper lobe, about the level of the third rib. It is one third of an inch long by one tenth of an inch broad. Its edges are smooth, showing that the rupture had occurred some little time before death. The section of the lung shows that both upper and lower lobes are extensively infiltrated with tuberculous disease in the stage of caseation and softening.

O 110

From a man aged 47, who suffered from chronic pulmonary tuberculosis with tuberculous ulceration of the intestines and larynx. He had been ill for three years with cough, and his breath had been very short for the last two weeks of life, but the dyspnoea had not come on suddenly.

(c) Showing Pyo-pneumothorax.

190. This specimen shows a large right pneumothorax together with the collapsed lung. Both layers of the pleura are thickened, especially the parietal layer. There were two openings from the pneumothorax into the lung, one in the lower lobe in the postero-lateral line one inch above the diaphragm (not seen in the specimen); the other, the size of a three-penny piece, quite close to the sternum, and communicating with a cavity in the upper lobe.

L 121

From a man aged 39, who died of chronic pulmonary tuberculosis with extreme lardaceous disease of the spleen, liver, and kidneys.

191. This specimen shows the left lung with the pleuræ generally adherent, excepting over the lower fourth of the lower lobe, where there is a pneumothorax the size of a cricket ball. At the apex of the pneumothorax, rather to the left of the middle line, there is a slit-like aperture half an inch long, leading by a valvular opening into a cavity in the lung. Both layers of pleura bounding the pneumothorax are greatly thickened.

I 104

From a woman aged 30, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

192. In this specimen the layers of the pleura are seen widely separated by a large cavity which, in the recent state, contained air and pus. Both layers, but especially the parietal, are greatly thickened. In the centre of the visceral layer is seen a ragged opening the size of a threepenny piece; this is in connection with a pulmonary cavity which has ulcerated through the pleura, thus giving rise to the pneumothorax.

An old specimen of which there is no further record.

B.H.C.

193. This specimen shows the chest wall with the right lung retracted and adherent to the first, second, and third ribs. The pleural layers, both thickened, are separated, and the cavity thus formed contained air and half a pint of sero-purulent fluid. The opening into the lung was not found. The organ contained numerous cavities and much fibro-caseous disease.

D 194

From a man aged 18, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

(d) Showing Extrusion of the Wall of a Cavity through the Opening in the Pleura.

194. This specimen shows the visceral pleura from a case of hydro-pneumothorax. On the surface of the right lower lobe, just below its upper margin, an opening the size of a shilling can be seen. Through this protrudes a mass the size of a pigeon's egg, composed of the membrane which had previously lined the cavity in the adjacent lung. Microscopical sections of this pseudo-cyst revealed the presence of abundant tubercle bacilli.

K 54

From a farrier aged 27, who died of chronic pulmonary tuberculosis complicated by a pneumothorax and tuberculous lesions in the larynx. The pleura contained a little pus as well as air.

(e) Showing a Localised Pneumothorax with Ulceration of Ribs and Costal Abscess.

195. This specimen shows a part of the chest wall of the left side. A flap of skin dissected up exhibits an abscess cavity, at the base of which are seen carious portions of the fourth, fifth, and sixth ribs. In the fourth space there is an aperture leading into a small localised pneumothorax (the extent of which can be seen at the back of the specimen), communicating in its turn with a cavity in the left upper lobe. A blue glass tube shows the communication and connection between the costal abscess, the pneumothorax, and the cavity in the lung.

I 207

From a schoolmaster aged 52, who died of chronic pulmonary tuberculosis and cirrhosis of the liver. The costal abscess was noticed six days before death.

SPECIMEN SHOWING TUBERCLES ON THE PARIETAL PLEURA.

196. This specimen shows a portion of the costal pleura containing numerous caseating miliary tubercles. In the centre these are closely aggregated together, forming an irregular mass the size of a florin, in which, however, individual tubercles can still be made out. Elsewhere the tubercles are more discrete.

I 144

From a girl aged 18, who died of tuberculous meningitis with caseous bronchial glands.

TUBERCULOUS DISEASE OF SUBPLEURAL LYMPHATICS.

197. This specimen shows the inner surface of the chest wall. Running along between the ribs in the position of the lymphatics, and below the pleura, can be seen long tortuous masses, about the size of the finger; in places the pleura is stripped off, and the yellow caseous material forming them can be seen. They are the subpleural lymphatics infiltrated with tubercle. C 161

From a boy aged 17, who died of caseous pulmonary tuberculosis.

PRIMARY MYXOSARCOMA OF PLEURA.

198. This specimen shows a section through a mass of growth which was attached to the anterior surface of the upper lobe and the lateral surface of the lower lobe of the left lung (which may be seen collapsed at the bottom of the specimen). The growth occupied the whole of the right side of the chest, depressing the diaphragm downwards, and pushing the heart to the right mid-axillary line. Its surface is covered with a thin pleura-like membrane, and is irregularly lobulated. On section it was found to consist of a coarse fibrous network enclosing large blood-cysts, cystic spaces which contained puriform material, and a few soft yellowish-white masses of growth. The tumour was extremely soft, and felt like a sponge containing fluid in its spaces. The blood-cysts formed the predominant feature of the growth, and as much as two pints of blood escaped on making punctures into the mass after death. The left lung was totally and the right partially collapsed. Microscopically the growth showed various appearances in different parts, but seems best described as a myxosarcoma. It is suggested that the growth sprang from the subserous tissue in the neighbourhood of the root of the lung. L 189

From a girl aged 18½, who two years previously had suffered from pleurisy, and had never been quite well since. On admission she complained of severe pain in the left side and dyspnoea, which had begun suddenly a month before. On examination signs of a large effusion into the left pleural cavity were discovered. Paracentesis on four occasions was negative, and the patient died of dyspnoea and exhaustion three months after the onset of her illness. See *Trans. Path. Soc.*, vol. xlix, p. 15.

GREATLY THICKENED PLEURA OF DOUBTFUL NATURE.

199. This specimen shows the right lung surrounded in its lower part by a dense fibro-cartilaginous capsule almost two inches in thickness. The lung is somewhat collapsed, and strands of the encircling tissue permeate its substance, which is otherwise natural. In the recent state this tissue was glistening and white, and had somewhat the appearance of pineapple; it contained here and there small spaces filled with clear pale yellow fluid. It had infiltrated the second, third, fourth, fifth, sixth, and seventh intercostal spaces, and during life caused them to bulge somewhat externally. The left pleura was in a somewhat similar condition. F 128

From a woman who had suffered from pain in the chest and epigastrium

for six months. She was admitted in a state of collapse, and towards the end there was suppression of urine. A small quantity withdrawn by catheter proved highly albuminous, but nothing was found in the kidneys after death to account for this.

Microscopically the thickened pleura showed no evidence of malignant disease (though this had been suggested by the bulging of the intercostal spaces), but appeared to be composed of fibrous tissue and fibrinous material, with here and there small round-celled accumulations.

TUBERCULOUS OSTEO-MYELITIS OF RIB CAUSING COSTAL ABSCESS.

200. The specimen shows a portion (two and a half inches long) of the fourth right rib and cartilage removed during life. The patient presented on admission signs of a "costal abscess" over this rib. This was opened, and a small hole leading into the rib found; resection of the rib and cartilage was then performed. The wound healed well. The specimen, which has been cut open, shows a central area of disease the size of a pea, with a small hole the size of a pin's head leading through the rib. A month later at the *post-mortem* a fibrous cicatrix was found occupying the place of the bone, which had been removed.

O 37

From a man aged 39, who died with chronic pulmonary tuberculosis and right empyema (see Specimen 174).

For another example of costal abscess, see Specimen 195.

SECTION VI.

DISEASES OF THE HEART AND PERICARDIUM.

CONGENITAL.

(1) Pulmonary Stenosis with Patent Septum Ventriculorum.

201. The heart is enlarged. Both ventricles are opened. The tricuspid, mitral, and aortic valves are normal, except that the latter are very large. The pulmonary orifice, which is slit open, is about half its natural size, and contains only two valves. In the ventricular septum can be seen an opening (which admitted the tip of the thumb), situated in its upper part, and so placed that during life the blood from the right ventricle must have been equally distributed between the pulmonary artery and the aorta.

H 46

From a cabman aged 32, who died of chronic pulmonary tuberculosis. He suffered from scarlet fever at the age of four, and thought his heart was affected then.

202. The specimen shows the anterior surface of the heart cut open. The organ weighed only four ounces. The right ventricle is somewhat

larger and more muscular than the left. The auricles are natural. On the left of the specimen, leading from the upper part of the right ventricle, may be seen the orifice of the pulmonary artery. This is greatly constricted, and before being cut into it admitted only a fair-sized probe. The artery itself, which may be seen winding round the aorta, is also much smaller than usual. The pulmonary valves are normal in number, but of very small size. In the septum ventriculorum in its upper portion there is a gap the size of a threepenny piece, from which blood passed from the right into the left ventricle and so into the aorta. The latter occupied a somewhat median position; its valves were natural. The foramen ovale was almost closed, though a probe could be passed through its upper margin. The ductus arteriosus was closed. The pulmonary arteries in the lungs were natural. **O 107**

From a girl aged 7, who was in the hospital with "congenital heart disease," and who died somewhat suddenly. During life she had no clubbing of the fingers, but occasional slight cyanosis. Her somewhat sudden death proved to be due to a cerebral abscess, the size of a Tangeline orange, situated in the left temporo-sphenoidal lobe. This had ruptured into both lateral ventricles, but chiefly into the left, which, like the abscess cavity, was full of greenish pus.

203. This specimen shows a greatly hypertrophied right ventricle. The pulmonary artery is stenosed, and contains only two valves, two appearing to have fused into one. In the extreme upper part of the interventricular septum is an opening, an inch in diameter, communicating with the left ventricle. **L 156**

From a boy (age not given), who died of chronic pulmonary tuberculosis. It was stated that he commenced getting blue at the age of six.

204. The specimen shows the lungs and heart of a small child. The communication between the two ventricles, which have been laid open, is shown by means of a glass tube.

An old specimen of which there is no further record.

(2) Patent Foramen Ovale.

205. The specimen shows a large patent foramen ovale, which on the *post-mortem* table was the size of a shilling. Stretching across the right auricular wall is a thinned and cribriform Eustachian valve, which materially limited the opening. **K 42**

From a woman aged 20, who died of chronic pulmonary tuberculosis and lardaceous disease of the liver, spleen, and kidneys. She does not appear to have shown during life any sign of morbus cordis, and the opening seems to have been only a potential one.

DISEASES OF THE PERICARDIUM.

ACUTE PLASTIC PERICARDITIS.

206. This specimen shows both layers of the pericardium in an acutely inflamed condition. The parietal layer is reflected upwards. Both

layers are much thickened and congested, and covered with thick yellow shaggy processes of lymph, which in the recent state bound them together.

M 121

From a girl aged 12, the subject of acute endocarditis and pericarditis, who died of heart failure. There had been a history of chorea three years previously.

TUBERCULOUS PERICARDITIS.

208. This specimen shows the heart with the parietal layer of the pericardium reflected upwards. On first examining the organ the surfaces of the serous membranes were found adherent; they were separated from each other with some difficulty. Each surface is now seen to be coated with a layer of firm yellow and tenacious lymph, which over the visceral pericardium is nearly one eighth of an inch thick.

K 114

From a man aged 47, who died of tuberculous pericarditis. His lungs showed at both apices signs of arrested pulmonary tuberculosis, and one bronchial gland was found calcareous. There was no other sign of tubercle in the body.

The pericarditis was proved to be tuberculous by microscopical examination, caseous areas, giant-cells, and tubercle bacilli being found.

209. This specimen shows the pericardium and heart. A hole has been made in the parietal layer of the pericardium, through which the visceral layer covering the heart is seen. Both layers are greatly thickened, and covered with thick yellow caseating material, while there is very little villous appearance about either, such as is seen in more acute varieties of pericarditis. Over the posterior surface of the heart the layers were adherent. The pericardial sac contained a small quantity of serous fluid.

I 145

From a man aged 35, who died with tuberculous disease of the lungs, the stomach (Specimen 349), the pericardium, and other serous membranes, and with multiple tuberculous tumours in the brain. See *Trans. Path. Soc.*, vol. xlv, p. 73.

ADHERENT PERICARDIUM.

210. The heart (chiefly the left ventricle) is greatly hypertrophied, weighing thirty-six ounces. The surface is shaggy, due to firm adhesions which had united the layers of the pericardium. The aortic cusps are greatly thickened and retracted, and in them are some calcareous plates. The mitral valve is also affected.

D 176

From a draper aged 35, who died of heart failure. He had suffered from rheumatism at the age of fifteen, and from syphilis when thirty-one. He looked upon his illness as of one year's duration.

See also Specimens 212, 229, and 241.

DISEASES OF THE MYOCARDIUM.

FIBROID DISEASE.

211. The fibroid disease is plainly seen in the wall of the left ventricle and especially towards the apex, where the wall is thin and composed almost entirely of a layer of fibrous tissue, with an imperfectly laminated arrangement, parallel to the wall of the ventricle; a few traces only are left of muscular tissue between the laminae. There is extensive dilatation and hypertrophy of the walls of all four cavities. **E 150**

From a plumber aged 45, who died with granular kidneys and arterio-sclerosis.

212. In this specimen the fibroid tissue is more localised, and corresponds to an area in the left ventricle near the apex, where a large decolourised and firmly adherent blood-clot is attached by a broad laminated base. The pericardium was adherent, and the left ventricle is hypertrophied. **C 122**

From a woman aged 36, who had, in addition to recent miliary tuberculosis of the lung, cirrhosis of the liver, granular kidneys, and ascites.

HYPERTROPHY IN ASSOCIATION WITH GRANULAR KIDNEY.

213. Great hypertrophy, with some dilatation of the left ventricle, is seen. The muscular substance is degenerate, the outside layer in the recent state being dark brown in colour, the inside layer having a patchy red appearance. The heart weighed twenty-seven ounces. **C 264**

From a man aged 49, who died of cerebral hæmorrhage. Arterio-sclerosis was present, and the kidneys were granular and much contracted.

For more extensive hypertrophy in association with aortic disease, see Specimens 210 and 239.

ATROPHY IN ASSOCIATION WITH PULMONARY TUBERCULOSIS.

214. The heart is extremely small, weighing only five and a quarter ounces. All its valves are healthy. On the surface of the organ, owing to the atrophy, the vessels stand out much more clearly than natural. **K 100**

From a woman aged 21, the subject of fibroid tuberculosis with tuberculous lesions in the intestines and larynx. The body was emaciated.

GUMMA OF MYOCARDIUM.

215. The specimen shows a mass, the size of a small marble, situated at the highest part of the intra-ventricular septum. It is dead white in colour, firm to the touch, and replaces the cardiac muscle. It projects chiefly into the right ventricle, but also extended slightly into the

left ventricle. In appearance it suggested either an infarct or a gumma. No infarcts were present elsewhere; there was, however, marked atheroma of the aorta and aortic cusps (the latter producing aortic regurgitation), and a doubtful history of syphilis. Microscopically the tissue showed a good deal of fibrosis, with much interspersed degenerated material.

N 155

The specimen was from a labourer aged 31, who died in the hospital with morbus cordis, aortic regurgitation, and oedema of the lungs.

ANEURYSM OF VENTRICULAR SEPTUM.

216. The left ventricle is laid open and its walls are seen to be thickened. Near the apex of the ventricle a cup-shaped patch of thickened and completely calcareous endocardium is seen, penetrating deeply into the hypertrophied septum. Around it the muscular tissue of the heart showed fibroid degeneration. Extensive atheroma of the aortic cusp of the mitral valve was also found.

L 182

From a labourer in the gasworks aged 51, who died of chronic pulmonary tuberculosis. The lungs were also oedematous and the kidneys slightly granular.

217. This specimen shows an aneurysmal pouch the size of a hazel-nut in the ventricular wall just below the aortic valves.

From a male patient, a servant aged 48, who died of phthisis, and who presented no evidence of cardiac disease during life. "The aneurysm was doubtless of congenital origin and due to imperfect development of the membranous part of the ventricular septum, which has bulged towards the right ventricle in the direction of greatest pressure:" (Dr. Kidd). See *Trans. Path. Soc.*, vol. xxxvi, p. 127.

218. The specimen shows dilatation and hypertrophy of all the cardiac cavities, but especially of the left ventricle. The aortic valve was incompetent, and the right cusp is seen to be almost entirely destroyed, a large mass of vegetations being attached to the portion of the cusp still remaining. Immediately below the mass, and just below the normal valvular pouch, is a small aneurysm the size of a bean. It is half an inch in length, and is situated between the layers of the interventricular septum. Its position is marked by a blue glass rod.

C 75

From a labourer aged 21, who had "rheumatic fever" four months previously, and suffered from "double aortic and mitral disease." He died somewhat suddenly of heart failure. See *Trans. Path. Soc.*, vol. xxxvi, p. 127.

219. The left ventricle is laid open; its walls are hypertrophied and its cavity somewhat dilated. The aortic orifice is much obstructed by masses of vegetations attached to the cusps, which are calcareous and thickened. Beneath the lower border of the left cusp, close to its junction with the right, there is an aneurysmal pouch the size of a Spanish nut, extending towards the right ventricle and abutting upon the septal cusp of the pulmonary artery.

C 174

From a coachman aged 43, who suffered from rheumatic fever two years before death, and had been short of breath for five months before his ad-

mission. During life he had shown evidence of aortic stenosis and regurgitation and mitral regurgitation. He died with symptoms of heart failure after one month's stay in the hospital. See *Trans. Path. Soc.*, vol. xxxvi, p. 129.

220. This specimen shows a heart weighing twenty-three ounces, with all four chambers dilated and hypertrophied. The aortic valve was incompetent, and is seen to be extensively diseased, the cusps being much puckered and scarred. The right sinus of Valsalva is prolonged downwards into a large irregular cavity running between the layers of the ventricular septum for one and a half inches. The cavity, the walls of which are roughened and opaque, extends round to near the left auricular appendix, where there is an opening the size of a pea leading into the left ventricle. C 134

From a stonemason aged 47, who had suffered from shortness of breath for three years, and who died of heart failure. During life he had shown the signs of aortic and mitral regurgitation. See *Trans. Path. Soc.*, vol. xxxvi, p. 130.

SMALL POLYPOID TUMOUR OF MUSCULUS PAPILLARIS.

221. A tumour, slightly pedunculated, and springing from the anterior surface of one of the musculi papillares, can be seen in the left ventricle. The aortic segment of the mitral valve is attached to the muscle from which the tumour springs. C 54

From a man aged 27, the subject of pulmonary tuberculosis. Microscopically the tumour proved to be composed almost entirely of fibrous tissue, and was no doubt a fibroma.

TUBERCULOSIS OF MYOCARDIUM.

222. A small, yellow, firm tubercle, in the recent state the size of a small hemp-seed, can be seen about the centre of the interventricular septum. K 82

From a little girl aged 5. For history of the case see Specimen 112.

DISEASES OF THE ENDOCARDIUM.

ENDOCARDITIS.

- (A) **Simple Acute Endocarditis (bead-like vegetations) in association with Chronic Pulmonary Tuberculosis.**

223. On the free edge of both cusps of the mitral valve can be seen a layer of small, yellowish, fibrinous granulations. This was the only evidence of cardiac disease. L 62

From a female aged 20, who died of acute pulmonary tuberculosis.

224. The left ventricle and auricle are opened, and vegetations can be seen along the free edges of both mitral cusps. These are most evident on

the auricular surface of the aortic cusp, but there were a few delicate vegetations on the ventricular surface. **M 138**

From a tailor aged 33, who died of chronic pulmonary tuberculosis with a right pneumothorax.

NOTE.—These specimens do not seem to have been microscoped, but similar examples of small bead-like vegetations arising in the course of pulmonary tuberculosis, which have been examined in this laboratory, have shown no microscopical evidence of tubercle.

(B) **Chronic Endocarditis.**

(1) **Mitral Stenosis.**

225. The cardiac wall has been dissected away to show the button-hole condition of the mitral valve, which is greatly stenosed. The cusps are firmly united together.

An old specimen of which no further record can be found.

226. The left auricle is opened, showing the puckered stenosed orifice into the left ventricle. A vegetation can be seen on one of the valves.

No further reference to this specimen can be found.

227. In addition to the mitral stenosis this specimen shows a thickened condition of the retiring angle between two contiguous aortic flaps.

An old specimen of which no further record can be found.

228. The left ventricle and auricle are laid open. The mitral valve is seen to be extremely stenosed, and converted into a slit-like orifice one quarter of an inch long by one eighth of an inch wide. Both cusps are greatly thickened, and the chordæ tendineæ are fused with the valve, with the exception of two strong fleshy bands stretching from the muscoli papillares across the left ventricle. The latter is thin-walled and atrophied. **L 142**

From a woman aged 31, who suffered from rheumatic fever at the age of seven, and died of heart failure.

229. Leading from the much-dilated left auricle into the ventricle is a constricted button-hole mitral orifice. The left ventricle is dilated and hypertrophied, and the aortic valves slightly thickened, while the whole surface of the heart is roughened, owing to the pericardial layers having been adherent. The heart weighed nineteen ounces. **I 91**

From a female aged 35, who had suffered from chorea when eleven, and from rheumatic fever when twelve years of age. She died of heart failure.

230. This specimen shows a typical button-hole constriction of the mitral orifice. On the outer margin of the auricular surface is a mass of vegetations the size of a threepenny piece. Both auricles are dilated. **K 178**

From a woman aged 35, who died of heart failure. She had suffered from rheumatic fever when seven years of age. At the *post-mortem* examination

bronchiectasis of the left lower lobe was found, and also thrombosis of the second right posterior cerebral artery, which accounted for the attack of hemiplegia five years before death.

231. This specimen shows both ventricles and the left auricle laid open. There is general dilatation of the left auricle, and also of the cavities on the right side of the heart. The mitral valve presents an irregular button-hole orifice; its aortic cusp is much thickened and contracted, and from its centre a wedge-like projection extends across the opening; the posterior cusp is smooth, but greatly thickened. **I 133**

From a clerk aged 32. No history of rheumatism could be obtained. He first complained of symptoms four years before death.

232. The heart here seen is greatly enlarged and weighed twenty-five ounces, and *in situ* measured seven inches transversely and ten inches from apex to base. Both auricles and both ventricles are shown opened; the left auricle is greatly dilated and hypertrophied, and the right auricle and ventricle are in a similar though less advanced condition. The mitral orifice is much constricted and admitted only the tip of the forefinger. The tricuspid orifice was greatly dilated and admitted five fingers easily. The pulmonary orifice possessed only two valves. **K 90**

From a woman aged 35, who died of heart failure. There was a history of rheumatic fever nine years previously. A week before death abdominal pain and diarrhoea set in, the result, as the *post-mortem* proved, of the presence of acute enteritis (see Specimen 350).

234. This specimen shows an extreme degree of mitral stenosis, the orifice of the mitral valve admitting only a very small quill. It is a combination of the funnel-shaped and button-hole variety. The left auricle is dilated, the left ventricle is smaller than normal, while the right is dilated and its walls hypertrophied. **K 137**

From a dressmaker aged 29, who had suffered from rheumatic fever two years previously, and died of heart failure.

(2) Stenosis of Mitral and Tricuspid Orifices.

235. The mitral orifice shows marked stenosis, the aperture being reduced to a mere chink, of the typical button-hole variety. The tricuspid orifice is also stenosed, the cusps being thickened and united together, and the orifice admitting the first finger only. Both auricles are markedly dilated and somewhat hypertrophied. The aortic orifice also shows marked stenosis, being reduced to a mere chink, owing to the presence of very large warty vegetations which are attached to the cusps of the valve. The vegetations are fleshy, and firmer than natural, suggesting that the endocarditis had been of the malignant type, but that fibrosis was now taking place. The left ventricle was hypertrophied. The *post-mortem* examination showed, in addition to the above lesions, "cardiac" liver, spleen, and kidneys, and some engorgement of the lungs. Both kidneys showed several old infarcts. **N 242**

From a woman aged 38, who had suffered from dyspnoea for twelve months before death

236. The mitral orifice shows typical funnel-shaped stenosis, the orifice admitting the tip of the little finger only. The tricuspid orifice is also stenosed, admitting one finger only. The cusps of the valve are shrunk and thickened, and united together. The aortic valves are also thickened, shrunk, and united together. They were markedly incompetent to the water test. Both auricles were considerably dilated and somewhat hypertrophied. The left ventricle was obviously hypertrophied and a little dilated. **N 243**

From a woman aged 40, who suffered from rheumatic fever when aged 19. *Post mortem*, the liver, spleen, and kidneys were congested and sclerosed. The lungs were engorged, and contained a single infarct in the lower lobe.

237. The orifice of the mitral valve is seen to be obstructed by a mass of vegetations. There is also thickening and narrowing of the tricuspid valve, while the right auricle is greatly dilated. **D 205**

From a girl aged 18, from whom no history of rheumatism or chorea could be obtained.

(3) **Aortic Stenosis.**

238. This specimen shows the aorta and left ventricle laid open. The ventricle is dilated and its walls hypertrophied. The aortic valves are adherent and calcareous, forming a ring-like constriction which barely admits the tip of the little finger. The aorta itself is singularly free from disease, there being but few atheromatous patches. **D 78**

From a male patient aged 47, a lighterman, whose symptoms commenced four years before death, when he was crushed between two barges. There was no history of rheumatic fever or of syphilis.

239. The heart shown is greatly hypertrophied, and weighed thirty ounces. The aortic orifice is greatly stenosed, the three valves forming one calcareous circle the size of a quarter of a pea. At one point the valves were highly irregular and warty, suggesting that patient had formerly suffered from malignant endocarditis, the vegetations eventually becoming calcified. **O 44**

From a cabman aged 52, who had suffered from heart trouble for thirty-four years. He was admitted into the hospital with heart failure and Cheyne-Stokes' respiration. The physical signs were those of aortic stenosis and regurgitation with tricuspid regurgitation. He died twelve hours after admission.

240. The left ventricle and auricle are seen laid open. On the thickened adherent, and retracted aortic valves a few small vegetations can be seen. The mitral valve is also stenosed (in a button-hole manner), and on its auricular surface a few vegetations can be seen. **C 180**

From a woman aged 21, the subject of fibroid pulmonary tuberculosis. She stated that four years ago she had had rheumatic fever.

(4) **Stenosis of all Cardiac Orifices.**

241. The heart seen is greatly enlarged and weighs twenty-four ounces. Both auricular cavities are dilated. The walls of the left ventricle are

greatly hypertrophied. Both aortic and pulmonary valves are greatly stenosed by dense fibrous thickening and adhesion of the cusps, the pulmonary orifice admitting only a cedar pencil, while the aortic is even smaller. The mitral orifice is of a button-hole shape, and will only admit a large probe. The tricuspid orifice is also stenosed, but admits the forefinger. The pericardium was universally adherent and thickened. **D 216**

From a machine boy aged 16, who had chorea ten years previously. Three years before death he had to give up work on account of cardiac pain. At the *post-mortem* examination he was found to have besides the cardiac disease, cirrhosis of the liver, the pancreas, and the kidneys. See *Trans. Path. Soc.*, vol. xlv, p. 91.

(5) **Aortic Regurgitation.**

See Specimens 236 and 219.

(c) **Malignant Endocarditis.**

(1) **Of Aortic Valve.**

242. The heart is seen to be enlarged. The aortic valves are more or less replaced by soft sprouting vegetations undergoing disintegration. A few vegetations were present on the mitral valve. **C 164**

From a labourer aged 19, who suffered from rheumatic fever three years previously, and became suddenly ill ten weeks before death. No infarcts were found *post mortem*.

243. The heart is much enlarged, weighing twenty-two ounces. The aortic valves show extensive disease. The anterior flap is covered with a mass of soft yellow granulations, and from the base of these there is a small opening into the left ventricle. There are similar but smaller granulations on the other two flaps, and some also round the orifice of the right coronary artery. **D 196**

From a girl aged 22, who gave no history of rheumatic fever. *Post mortem*, in addition to the lesions in the heart, some quiescent tuberculosis of both lungs was found, and also a recent infarct at the extreme apex of the left upper lobe.

244. The whole heart is hypertrophied, weighing eighteen ounces. The left ventricle is opened, and the aortic valve and the aortic cusp of the mitral valve are seen; all are extensively diseased, being covered with extensive irregular fibrinous granulations. At the junction of the aortic cusp of the mitral valve and the aortic valve there are several pockets filled with granulations, and also a small cardiac aneurysm. From the mitral valve the disease spreads on to the septum.

From a plumber aged 19, who, in addition to the cardiac lesions, was found *post mortem* to have parenchymatous nephritis and old infarction of the spleen.

245. The aortic orifice here is nearly obliterated by enormous calcareous vegetations springing from the ventricular aspect of the aortic valves. The aorta is dilated and atheromatous, and there is considerable hyper-

trophy of the left side of the heart. The anterior flap of the mitral orifice is perforated and surrounded by exuberant granulations. **G 265**

From a porter aged 38, who suffered from double aortic disease.

246. In this specimen firm vegetations, evidently of some standing, can be seen on the free edge of the aortic valves. On the mitral valve, chiefly on the aortic cusp, there are soft pendulous vegetations both on the free edge and on the auricular surface. **D 100**

From a waiter aged 60, who, in addition to cardiac disease, suffered from quiescent pulmonary tuberculosis at the apices of both lungs. He had had rheumatic fever thirty years previously, but had only been acutely ill for six months.

(2) Of Mitral Valve.

247. The only parts of this heart showing evidence of disease are the mitral valve and the endocardium lining the left auricle. Both cusps are thickened, puckered, and covered with vegetations. Looked at from above, these vegetations are seen to fill the mitral orifice and spread from the valves on to the auricular endocardium, especially from the posterior cusp, whence a large fungating mass can be seen spreading along the posterior wall of the left auricle. **K 72**

From a governess aged 31, who had suffered from rheumatic fever twenty years before, and had many attacks subsequently. At the *post-mortem* examination emboli were found in the spleen, kidneys, skin, intestines, and brain.

248. The mitral orifice can be seen greatly obstructed by large sprouting masses of vegetations. **E 65**

From a boy aged 12, who had suffered from shortness of breath for six years, but had been acutely ill for a few weeks only. Old embolic scars were found in the kidneys and spleen, and multiple hæmorrhages in the lungs and intestines. There was also meningitis.

- 248A. Both auricles and ventricles are laid open. The left auricle, the orifice of which is seen to be obstructed by a soft mulberry-like mass of vegetations, is dilated and its walls hypertrophied. **E 131**

From a woman aged 31, who died of heart failure. She had suffered from chorea at the age of seven.

249. Along the free edges of the mitral valve, especially of the aortic cusp, can be seen clusters of vegetations. In places these have attained considerable size, and hang down into the cavity of the left ventricle. A similar sessile cluster can be seen on the ventricular surface of the left posterior aortic valve.

No reference can be found to this specimen.

See also Specimen 237.

RUPTURED CHORDÆ TENDINEÆ.

250. The edges of the mitral valve appear studded with luxuriant warty vegetations hanging down into the left ventricle. The posterior wall

of the left auricle is covered with similar vegetations. Scattered groups are also present in the left ventricle. From the right papillary muscle hangs a ruptured chorda tendinea covered with a large mass of sprouting granulations. **B 153**

From a tiler aged 31, who had rheumatic fever ten years before, but had been acutely ill for six months only. There were also found *post mortem* infarcts of the kidneys and spleen.

251. This specimen shows some ruptured chordæ tendineæ of the aortic cusp of the mitral valve. The torn cords hang down in the left ventricle and are covered with lymph. **K 226**

From a labourer aged 44, who experienced a sudden cardiac pain while lifting a heavy weight two months before death. No evidence of any previous endocarditis could be found at the *post-mortem*.

RUPTURED AORTIC CUSP.

252. This specimen shows ulcerative laceration of the left posterior aortic flap, ulceration of the anterior flap, and deep ulceration of the surface immediately above these flaps. There is also an unusual fibrinous stricture beneath the aortic flaps.

An old specimen presented by Dr. Burney Yeo in 1881.

253. The heart weighs twenty-two ounces; the left ventricle is hypertrophied, and the aortic valve incompetent. In the right posterior cusp, close to its junction with the adjacent cusp, there is a small sharply cut opening, while all the segments of the valve are thickened and have vegetations upon them. The mitral valve is thickened, the opening is funnel-shaped, and on both surfaces of the cusps there are vegetations. **C 203**

From a furniture-mover aged 43, who had rheumatic fever twenty years previously. One year ago he suffered from a sudden pain across the chest, since when he has had palpitations and sudden faintings.

RUPTURED ANEURYSM OF AORTIC VALVE.

254. The aortic valves are only two in number, there being a large mitral cusp and a large anterior cusp formed by the fusion of the right and left cusps. Soft fibrinous vegetations can be seen hanging from the ventricular surface of these cusps, and each of them shows a ragged ulcerated opening, through which blood regurgitated back into the ventricle. On the anterior cusp this opening was situated at the extremity of a definite aneurysm of the cusp. **D 42**

From a female patient admitted into the hospital in a dying condition, and found *post mortem* to be suffering from malignant endocarditis.

255. The specimen shows the left ventricle and aorta of a heart, which weighed twenty-five ounces. The aortic valves show evidence of old and recent endocarditis. The edges of the mitral and posterior cusps are thickened and shrunk, while on the anterior cusp there is a mass of recent warty vegetations covering the ventricular surface. At one spot

there is a definite bulging or aneurysm of this cusp, and at the apex the tissue is ulcerated away, leading to a communication between the aorta and the ventricle. To the left of the valvular aneurysm the ulcerative process has caused a true rupture of the valve. The mitral valve was incompetent. O 49

From a brewer's labourer aged 40, in whom there was a history of alcoholism, and who had had rheumatic fever eleven years before. He had been short of breath for three months, and had all the signs of heart failure on admission to the hospital. Eight hours before death his symptoms suddenly became very urgent; this may have been associated with the rupture of the valve.

ATHEROMA AND THROMBOSIS OF CORONARY ARTERIES.

256. In this specimen there was extreme atheroma of both coronary arteries. The right is blocked throughout by firm partly decolourised and adherent clot, while the left is partly thrombosed and obstructed. All the chambers of the heart are hypertrophied and dilated. C 258

From a man aged 46, who suffered from granular kidneys and hypertrophied heart. The valves were natural. He was in the hospital for two weeks before death. During that time the action of the heart was extremely irregular and weak, and there was much shortness of breath. Further, he had frequent spasmodic attacks of dyspnoea, which were thought to be of the nature of renal asthma. He *gradually* sank from cardiac failure. See *Trans. Path. Soc.*, vol xxxvii, p. 197.

SECTION VII.

DISEASES OF THE PULMONARY ARTERIES, INCLUDING PULMONARY ANEURYSM.

CHRONIC ENDARTERITIS (ATHEROMA).

257. This specimen shows the main branches of the pulmonary arteries within the lung. Numerous yellow patches are seen scattered throughout their walls; these are for the most part discrete, but at certain points they show a tendency to run together to form larger areas. To the naked eye they present the appearance of atheroma. The aorta, the coronary, and the radial arteries seemed natural, but the main pulmonary artery showed similar yellowish patches. No evidence of ulceration or of calcareous change in the patches was anywhere met with. Microscopically the patches proved to be areas of chronic endocarditis; they showed some fibroid change, but no fatty or calcareous degeneration. The lungs were engorged and had undergone some *post-mortem*

change, but were otherwise natural, except that the pleura over the left lung was generally adherent. The heart weighed seventeen ounces; the left side was natural, but the right auricle and ventricle were obviously dilated and hypertrophied. The tricuspid orifice was somewhat dilated, admitting three fingers easily, but the remaining orifices were natural. O 15

From a female patient, S. G., aged 21, a cigar maker, admitted for morbus cordis, November 26th, 1900. She had been ill a long time, and for three years had had much dyspnoea. Her symptoms suggested congenital disease of the heart. See *Clin. Soc. Trans.*, vol. xxxiv, p. 248, 1901, and vol. xxxvi, p. 218, 1903, where a full clinical and pathological description of the case will be found.

THROMBOSIS.

258. The specimen shows the completely excavated left lung. On its smooth wall, towards the root of the lung, are seen numerous elongated and branched embossed masses, which in the recent state were of a deep red colour; these are the thrombosed arteries surrounded by fibrous tissue. The main trunk of the pulmonary artery is filled with a tough, firmly adherent thrombus. I 175

From a man aged 24, who suffered from chronic pulmonary tuberculosis, and died of acute peritonitis, caused by the rupture of a duodenal ulcer.

See also Specimen 120.

INFARCTION OF LUNG.

259. The main artery going to the lower lobe of the lung is seen to be obliterated by adherent clot. This thrombosis has taken place as a result of embolus. The whole of the lower lobe is absolutely solid, and in the recent state was deep red in colour.

An old specimen of which there is no further record.

ANEURYSMS.

(1) Of the Main Pulmonary Artery.

260. This specimen shows a fusiform aneurysm of the main pulmonary artery, which in the recent state was globular in shape and of the size of a small orange. It extended from the pulmonary valves to the bifurcation of the vessel, and was therefore situated partly within and partly without the pericardium. On opening the chest it was seen to protrude beneath the sternal margin of the somewhat emphysematous left upper lobe, and thence extended backwards towards the root of the left lung, where it slightly compressed the left pulmonary veins. The aneurysm, as well as the two main divisions of the artery, is thrombosed, but a probe could be passed between a softer part of the clot and the vessel wall. The pulmonary artery itself and also its branches throughout both lungs showed marked atheroma. The pulmonary orifice was of large size, and possibly towards the end of life was incompetent; the

tricuspid evidently allowed great regurgitation; the other valves were natural. The right auricle and ventricle were greatly dilated, and the ventricle much hypertrophied. The heart with the pericardium and vessels attached weighed twenty ounces. Owing to the enormous dilatation of the right auricle a potential opening in the foramen ovale had become an actual one, and on the *post-mortem* table it admitted the tip of the little finger.

K 22

From a married woman aged 29, whose illness began five years before death with gradually increasing shortness of breath. Two years later she became cyanosed, the condition since then slowly becoming more marked. Occasionally she had œdema of the ankles.

On admission, three months before death, she was extremely cyanosed, her face being quite blue, and her lips almost black, while there was very marked clubbing of the fingers and toes. The right margin of the cardiac dulness extended to the right border of the sternum, while the apex beat was in the natural situation, at which spot a soft systolic murmur was audible. The pulmonary second sound was markedly accentuated, but no other sign suggestive of pulmonary aneurysm seems to have made its appearance. The patient soon after her admission began to suffer from headache, and died after being unconscious for a week from a cerebral abscess situated in the left frontal region of the brain.

(2) **Intra-pulmonary Aneurysms occurring in the course of Pulmonary Tuberculosis.**

(a) **Embolie Aneurysm.**

261. At the apex of the lower lobe of the left lung is seen a sacculated aneurysm with thick walls, the size of a shelled walnut, springing from a secondary branch of the pulmonary artery. The sac is filled with laminated thrombus, but the corresponding artery is not obstructed. The aneurysm is not situated in a preformed pulmonary cavity, but has developed in the midst of healthy lung tissue.

D 196

From a single woman aged 22, who had never had rheumatism, but who gave a history of dyspnoea and wasting of about twelve months' duration. The physical signs during life indicated great enlargement of the heart, with double aortic, double pulmonary, and systolic mitral murmurs. Signs of pulmonary phthisis were also detected, and tubercle bacilli were found in the sputum. At the autopsy malignant endocarditis affecting the aortic valves, the aorta, and the pulmonary artery was found, a patent ductus arteriosus, and a small sacculated aneurysm of the aorta the size of a small marble, lying to the left and in front of the trachea. Infarcts in the spleen and kidneys, and scanty tuberculous nodules in the lungs, some softening into minute cavities, were also discovered.

The intra-pulmonary aneurysm seemed to be without doubt embolic in nature, and to have no connection with the limited tuberculosis. As an example of an embolic aneurysm of the pulmonary artery the specimen is of extreme rarity. See *Trans. Path. Soc.*, vol. xlv, p. 47, where the case is described by Dr. Kidd.

(b) **Aneurysm secondary to Bronchiectasis.**

See No. 79 (D 111).

(c) **Aneurysms secondary to Chronic Pulmonary Tuberculosis.**

(1) **Specimen showing an early stage in their formation.**

262. The specimen shows the method of formation of a pulmonary aneurysm in an unsupported vessel in a cavity. Stretching across a large irregular cavity in the lung can be seen an artery which shows upon it a fusiform swelling. This in the recent state was much more marked. **K 13**

From a woman aged 39, who died of chronic pulmonary tuberculosis.

(2) **Specimens showing Aneurysms of various sizes.**

263. This specimen shows old chronic excavation of the lung, and in the cavity can be seen some small pedunculated aneurysms the size of millet-seeds.

An old specimen of which there is no further record.

264. This specimen shows a small, thick-walled, pedunculated aneurysm the size of a small hazel-nut.

An old specimen of which there is no further record.

- 264 A. This specimen shows a fusiform pulmonary aneurysm situated in an old, large, yet somewhat contracted cavity. Its position is marked by a blue glass rod.

An old specimen of which there is no further record.

265. This specimen shows a fusiform pulmonary aneurysm situated at the base of an old cavity. It has not ruptured.

An old specimen of which there is no further record.

266. This specimen shows a large cavity of some standing in the lower lobe of the left lung. Lying upon its posterior wall is a sessile aneurysm the size of a walnut. **I 10**

From a woman aged 30, who died of chronic pulmonary tuberculosis.

267. Showing a pulmonary aneurysm, unruptured, in the right lung.

N 223

From the same patient as specimen No. 274, where the history of the case is described.

268. The specimen shows an aneurysm about the size of a horse-chestnut lying in a cavity of considerable extent in the upper lobe of the right lung. The aneurysm springs from a vessel emerging into the excavation. It is extensively ruptured, and blood-clot can be seen adherent to the walls. The lung tissue surrounding the cavity is in a fibroid condition and has contracted. **M 229**

From a man aged 22, who suffered from chronic pulmonary tuberculosis with lardaceous disease of the liver, spleen, kidneys, and intestines.

(3) Showing Rupture of Pulmonary Aneurysms.

269. An aneurysm of a large branch of the pulmonary artery is seen completely filling a cavity in the lower lobe of the left lung. The aneurysm is the size of a walnut, and has ruptured at its lower and anterior part. **K 176**

From a man who suffered from pulmonary tuberculosis and extreme emphysema.

270. This specimen shows a large thin-walled aneurysm which has ruptured. In its interior can be seen a certain amount of clot.

An old specimen of which there is no further record.

271. In the antero-lateral part of the left lower lobe there is a large cavity containing a thin-walled ruptured aneurysm the size of a walnut. In the recent state the cavity was entirely filled with blood-clot. **L 86**

From a man aged 34, the subject of chronic pulmonary tuberculosis, who died of hæmoptysis.

272. The lung shows tuberculosis of a very chronic type. In the upper lobe (right) is a large cavity containing a ruptured aneurysm at its lower and posterior part. Another aneurysm, the size of a large marble, is seen at the apex of the lower lobe. This also had ruptured, and the cavity is filled with blood-clot. **K 169**

From a man aged 39, who suffered from chronic pulmonary tuberculosis, and died of exhaustion after frequent attacks of hæmoptysis.

273. In this specimen, at the apex of a large cavity, a pedunculated aneurysm is seen hanging from a large pulmonary vessel. Both the aneurysm and the vessel are laid open.

An old specimen of which there is no further record.

274. The specimen shows the left lung bisected, and the two halves opened out. The lung is seen to be somewhat shrunk, while the pleura is greatly thickened. The upper lobe is in a condition of almost total excavation, while a large cavity communicating with the former is also present in the lower lobe. On the anterior wall of this cavity is situated an aneurysm the size of a small marble. This had ruptured at one spot, and as a result both cavities were found filled with recent blood-clot, which on the right-hand side of the specimen has been left *in situ*. **N 223**

From a man aged 20, a shop assistant, who was in the hospital suffering from chronic pulmonary tuberculosis, with a history of two years' duration. During the last week of his life he suffered on three occasions from hæmoptysis, bringing up seven, fourteen, and five ounces respectively. In the right lung, which showed both old and recent tuberculous disease, a second aneurysm was found (specimen No. 267) very similar in size to the one here shown. It had not, however, ruptured.

275. In the lower lobe near the septum, and about four inches from the

apex, can be seen a small aneurysm completely filling a cavity the size of a small marble. This had ruptured. **L 38**

From a man aged 28, who suffered from chronic pulmonary tuberculosis, and who had frequent attacks of hæmoptysis shortly before death.

276. In the anterior part of the left lower lobe there is a cavity completely filled by an aneurysm of one of the main branches of the pulmonary artery. This aneurysm has ruptured at its upper extremity. **K 208**

From a man aged 36, the subject of chronic pulmonary tuberculosis, who died of hæmoptysis.

277. This specimen shows a large elongated cavity in the left upper lobe, from which springs a pedunculated pulmonary aneurysm the size of a pea. It is widely rent. **K 105**

From a man aged 41, who suffered with chronic pulmonary tuberculosis, and died of exhaustion after hæmoptysis.

278. A thin-walled ruptured pulmonary aneurysm, widely rent, is seen situated in an old cavity.

No further reference can be found to this specimen.

279. This specimen shows a ruptured sessile pulmonary aneurysm situated on the walls of an old fibroid and contracted cavity. **B 99**

From a man aged 26, who suffered from chronic pulmonary tuberculosis, and died a few minutes after a large hæmoptysis.

280. This specimen shows an extremely contracted lung with enormously thickened pleura. In a small and greatly puckered cavity near the lower part of the upper lobe is a ruptured pedunculated aneurysm. **B 104**

From a man aged 36, who suffered from "fibroid phthisis," and died after hæmoptysis to the extent of one pint.

281. A large aneurysm is seen completely filling an old smooth-walled cavity. It is ruptured at its upper and anterior part. **I 164**

From a man aged 25, the subject of chronic pulmonary tuberculosis.

282. This specimen shows an aneurysm the size of a large walnut. It has thickened walls, but has ruptured into the cavity containing it. **C 157**

From a man who suffered from chronic pulmonary tuberculosis and died of hæmoptysis.

283. An aneurysm the size of a large walnut, formed by the lateral bulging of a small vessel, can be seen on the wall of a large irregular cavity in the left lung. It has ruptured near its neck. **C 101**

From a man aged 31, the subject of chronic pulmonary tuberculosis, who died of hæmoptysis.

284. The specimen shows the upper lobe of the left lung. The upper two-thirds of the lobe are seen to be converted into a large cavity of

some little standing. On its posterior wall a small aneurysm the size of a pea is seen cut open. At its base is seen a small rupture one eighth of an inch in length, evidently the seat of the fatal hæmoptysis. The aneurysm contained no laminated fibrin whatever, but when first cut into, the cavity was found to be full of recent red blood-clot. **O 45**

From a soldier aged 25, who died as the result of hæmoptysis. *Post mortem* in addition to the tuberculous disease of the lung, tuberculous disease of the lowest lumbar vertebra, (causing a lumbar and psoas abscess), together with tuberculous ulceration of the intestines, were found.

(4) Showing Multiple Pulmonary Aneurysms.

285. This specimen shows a recent caseating cavity at the base of the left lung. Two branches of the pulmonary artery cross it, and on them are fusiform aneurysms the size of a pea and small bean respectively. Neither of them has ruptured, though the walls of one are in places very thin. **B 201**

From a woman aged 26, who died of chronic pulmonary tuberculosis and parenchymatous nephritis. See *Trans. Path. Soc.*, vol. xxxv, p. 98.

286. This specimen shows the upper part of the right lung riddled with cavities. In the upper lobe two aneurysms can be seen, the superior one, which had ruptured, being indicated by a blue glass tube. In an elongated cavity at the apex of the lower lobe is a larger sessile aneurysm. **L 33**

From a man aged 21, who died with chronic pulmonary tuberculosis. Six days before death he had an hæmoptysis of eighteen ounces.

287. Two small aneurysms are shown at the base of the lung. The larger of these had ruptured.

An old specimen of which there is no further record.

289. This specimen shows, by means of three blue glass rods, three small unruptured pulmonary aneurysms situated at the base of the left lower lobe and springing from the tough walls of the small old contracted cavities. There was a similar unruptured aneurysm at the apex. **C 24**

From a woman aged 26, who died of chronic pulmonary tuberculosis.

290. In a small cavity can be seen two aneurysms, one large and one small. The larger is ruptured. **C 266**

From a man aged 39, the subject of chronic pulmonary tuberculosis, who died of sudden hæmoptysis.

291. The position of the aneurysms is shown by means of coloured glass rods. The larger is thin-walled and widely rent; the smaller is thick-walled and was unruptured. It has been cut across. **B 224**

From a man aged 28, who suffered from chronic pulmonary tuberculosis and died seven minutes after a large hæmoptysis.

292. The specimen shows the left apex of a lung in which a cavity the size of a hen's egg, with tough walls, is situated. It contains two

aneurysms placed close together, one with thickened walls the size of a pea, the other, immediately above it, thin-walled and as big as a large walnut. This has ruptured by two irregular rents. **C 220**

From a man who suffered with chronic pulmonary tuberculosis and died of hæmoptysis.

293. The right lung is shown opened in various places. Everywhere numerous aneurysms of various sizes, but for the most part small, can be seen. In one small cavity near the posterior base of the lung five were present, and in all twenty-two aneurysms were found. One of the aneurysms had ruptured, giving rise to fatal hæmoptysis. **B 177**

From a woman aged 30, who suffered with chronic pulmonary tuberculosis and died of hæmoptysis. See *Trans. Path. Soc.*, vol. xxxv, p. 98.

294. This specimen shows a section of the whole lung. In the upper lobe there is a sessile aneurysm completely filling a small cavity. In the lower lobe, in a large cavity, there is a pedunculated aneurysm, the size of a monkey-nut, which has ruptured by a large opening.

No further reference can be found to this specimen.

(5) Showing Rupture and Partial Repair.

295. This specimen shows a cavity at the apex of the left lung filled with clot, contained within which is a thin-walled pear-shaped aneurysm the size of a large bean. There are two small openings into the aneurysm, one communicating with a pulmonary artery and the other with the bronchus. **C 186**

From a carpenter who suffered with chronic pulmonary tuberculosis and died after frequent attacks of hæmoptysis. The aneurysm had ruptured, but the blood-clot which formed in the cavity had apparently exercised sufficient pressure temporarily to close the opening, since the patient died several hours after the last hæmoptysis.

296. This specimen shows an aneurysm the size of a millet-seed, in a small cavity in the right lung. It showed possible evidence of past rupture, there being extravasation of blood into its coats; but if so, the rupture hole had closed again. **C 267**

From a man aged 30, who died of chronic pulmonary tuberculosis. There had been hæmoptysis, half a pint, twelve days before death.

(6) Showing Thrombosis and Apparent Cure of the Aneurysm.

297. The left lung is laid open, and just below the apex of the lower lobe can be seen an oval aneurysm an inch and a half in its long diameter. It is filled with laminated clot, and surrounding it is a thin-walled pulmonary cavity. **K 121**

From a man aged 45, who died of chronic pulmonary tuberculosis, and who had had repeated attacks of hæmoptysis shortly before death.

298. This specimen shows a very thick-walled sessile aneurysm the size of a filbert, filled with organised clot, in a pulmonary cavity.

An old specimen of which there is no further record.

299. At the extreme apex of the right lung, which is shown, can be seen hanging in an old cavity a pedunculated aneurysm the size of a small hazel-nut. Its walls are thick and fibrous, and it is filled with clot.

L 53

From a man aged 31, who died of chronic pulmonary tuberculosis with miliary tuberculosis in lungs, kidneys, and meninges.

SPECIMEN SHOWING BLOOD-CASTS FROM THE BRONCHI.

300. A day or two before death the patient, who died of fatal hæmoptysis, coughed up the larger of the two clots; the smaller was found in the bronchial tubes at the *post-mortem* examination.

N 223

SPECIMENS SHOWING THE APPEARANCE IN THE LUNGS OF INHALED BLOOD.

301. This specimen shows a portion of the right lung which is everywhere speckled with patches of inhaled blood, due to the rupture of a pulmonary aneurysm in the left lung.

M 162

From a man aged 27, the subject of chronic pulmonary tuberculosis, who died immediately after an attack of hæmoptysis of thirty ounces.

302. The specimen shows a longitudinal section through the right lung, the lower lobe of which shows the appearances due to inhaled blood.

N 220

From a woman aged 37, who suffered from chronic pulmonary tuberculosis, and who died from hæmoptysis. No aneurysm could be found after death.

SECTION VIII

DISEASES OF THE AORTA AND MAIN ARTERIES.

ATHEROMA OF AORTA.

303. This specimen shows the left ventricle and the first part of aorta laid open. The ventricle is dilated and hypertrophied, and the aortic cusps are rigid and somewhat thickened. The aorta itself is covered with patchy atheroma, and although the vessel is dilated, compensatory changes have taken place in the walls, which are greatly thickened.

K 187

From a woman aged 35, who was married, and did only domestic work at home. She suffered from anginal attacks.

304. This specimen shows a very marked degree of atheroma of the aorta, and as a result of the weakening of the walls thus caused there

has been a general dilatation. The thoracic aorta is also shown in its descending part; here the atheromatous patches are much more discrete, and portions of healthy vessel wall can be seen. As the aorta approaches the diaphragm the amount of disease becomes much less.

An old specimen to which no reference can be found.

ANEURYSM OF THE ARCH OF THE AORTA.

(1) Aneurysm of the First Part of the Arch below the Reflection of the Pericardium.

305. The aneurysm shown is of the intra-pericardial part of the aorta. Its orifice is just above the left posterior sinus of Valsalva. The sac, which is "the size of a man's fist," lay upon the left bronchus and pulmonary veins, to which it was adherent. The pericardium was firmly adherent to the sac of the aneurysm and to the left auricle. The aorta showed marked atheroma, and the aortic valves were incompetent. **G 299**

From a plasterer aged 33, with an obscure history of syphilitic infection seven years ago. Death was due to syncope.

- 305A. The specimen shows an intra-pericardial aneurysm of the aorta the size of a Tangerine orange, with thin walls. This ruptured by a pin-point perforation (marked by a red glass rod), and gave rise to a large hæmorrhage into the pericardium. **L 181**

From a man aged 35, who died in the out-patient department from sudden syncope, death occurring within ten minutes of the onset of the fatal symptoms. The man had previously suffered from angina pectoris.

(2) Aneurysm of the First Part of the Arch below and above the Reflection of the Pericardium.

306. The specimen shows an enormous sacculated aneurysm of the first part of the aortic arch. This extended downwards on the right of the heart nearly to the epigastrium, displacing the heart to the left. It had commenced to rupture into the pericardium, which contained four ounces of blood. The right pleura contained three pints of serous fluid, the right lung being collapsed. **B 87**

The patient was a man of unknown age. Death occurred after an attack of syncope, accompanied by severe pain, lasting one hour.

307. In addition to the aneurysm, which can be seen pressing on the pulmonary artery, there is also hypertrophy of the right ventricle. **G 143**

The patient was a cab-driver aged 35, and suffered also from chronic pulmonary tuberculosis, dying from pulmonary hæmorrhage. No further *post-mortem* record.

308. The specimen shows an aneurysm the size of a cricket ball arising from the ascending arch of aorta. The opening commences five eighths of an inch above the aortic valves, and is, roughly, two and three

quarters of an inch long by one and three quarters of an inch broad. The aneurysm is filled with recent, probably *post-mortem*, clot. A second aneurysm arises from the anterior sinus of Valsalva. This is the size of a pigeon's egg, and projects directly into the cavity of the right ventricle. The aorta showed hardly any atheroma. The large aneurysm had compressed the superior vena cava and also the bifurcation of the trachea and the left bronchus. N 228

From a man aged 33, who was admitted into the hospital suffering from extensive and active chronic pulmonary tuberculosis. On admission no signs of aneurysm were observed, but during the last few weeks of life aneurysmal dulness appeared to the right of the sternum, and extended somewhat rapidly. Dyspnœa and œdema of the face, due to pressure on the trachea and superior vena cava, were also noticed. *Post mortem* the aneurysm formed a tumour in the region of the superior mediastinum, separating the edges of the lungs on either side. Both lungs showed extensive tuberculous disease, partly old, but in part also quite recent.

(3) **Aneurysm of the First Part of the Arch above the Reflection of the Pericardium.**

309. The aorta immediately above the valves is seen to widen out into a large sac filled with soft gelatinous clot. By pressure of the aneurysm the right lung was compressed, and posteriorly pressure on the trachea has caused a non-perforating ulcer about the size of a shilling just above the bifurcation. A 325

From a labourer aged 36. Death was due to asphyxia caused by pressure of the aneurysm on the trachea.

310. This specimen shows dilatation of the first part of the arch, while, in addition, about an inch and a half above the valves there is an opening admitting the tip of the forefinger, leading posteriorly into a large sacculated aneurysm. This is situated nearly in the middle line, and presses on the bifurcation of the trachea, but more especially on the right bronchus. The superior vena cava was also compressed, but not thrombosed. The right bronchus was ulcerated through about one inch from the bifurcation of the trachea, and through this the aneurysm had ruptured. K 76

From a brewer's labourer aged 28, who died from hæmoptysis caused by rupture of the aneurysm into the right bronchus. There was found *post mortem* broncho-pneumonia of the right lung due to compression.

(4) **Aneurysm of the First and Second Parts of the Arch of the Aorta.**

311. The heart and the whole of the aortic arch are shown. The latter is generally dilated, extremely atheromatous, and converted into a calcareous shell. From the posterior surface of the aorta, about an inch and a half from the valves, there is an opening, leading into a saccular aneurysm the size of a Tangerine orange, entirely filled with laminated clot. L 204

From a cab-driver aged 51, who died of chronic pulmonary tuberculosis.

312. The aorta is atheromatous and markedly dilated, the dilatation commencing just above the sinuses of Valsalva, within the attachment of the pericardium, and extending to the junction of the transverse with the descending portion of the arch. **A 43**

From a publican aged 44, who, in addition to the aneurysm, suffered from chronic pulmonary tuberculosis with excavation of both lobes of the right lung.

313. The specimen shows a large saccular aneurysm affecting the ascending and transverse portion of the arch. Springing from the main aneurysm three small sacs are seen. One of these is situated posteriorly and compresses the trachea at its bifurcation; it caused softening and ulceration of its walls over an area the size of a sixpenny piece. **C 246**

From a man aged 50, a hard drinker, and who had syphilis eighteen years ago. In addition old tuberculous deposits were found at both apices. Death was sudden.

314. The first part of the aorta is dilated and fusiform, and opens suddenly into a large sacculated aneurysm the size of a small cocoanut, which involved the whole transverse arch. The anterior and upper part of the sac was occupied by a thick layer of soft laminated clot. The aneurysm was adherent to the manubrium sterni, and compressed the lower part of the trachea, and to a less extent the great bronchi. The left recurrent laryngeal was pushed aside but not compressed. Death occurred from gradual asphyxia. At the *post-mortem* symmetrical fibrosis of both lungs was found. **D 218**

From a bargeman aged 54, who had been a hard drinker.

Secondary to Congenital Stricture of the Aorta.

315. The aortic orifice is widely dilated and presents only two cusps, the right being twice its normal size. On the edge of the larger cusp can be seen a mass of vegetations, while a similar condition, was observed on the aortic cusp of the mitral valve. The aorta itself is slightly atheromatous, and the first part greatly dilated. Just beyond the origin of the subclavian artery is an annular constriction, probably congenital in origin; the lumen of the aorta here only admitted the tip of the little finger. At the *post-mortem* examination the kidneys, spleen, and liver showed changes due to cardiac failure. **K 36**

From a cab-driver aged 43, who was in the hospital suffering from morbus cordis (aortic and mitral regurgitation) and signs of dilatation of the aorta.

(5) Aneurysm of the Second Part of the Arch of the Aorta.

316. This aneurysm, the size of a walnut, is sacculated and extends backwards, pressing on the trachea and causing almost complete occlusion of that tube at the level of the manubrium sterni. The opening from the aorta has smooth round edges, and the aneurysm is lined by organised blood-clot. **D 144**

From a mechanic aged 33, who suffered from stridor for three weeks before death, and died from urgent dyspnoea.

317. The whole aorta is seen to be atheromatous and dilated, while from the right side of the transverse portion there springs a sacculated aneurysm growing forwards. It contains a small amount of clot, and above is closely adherent to the manubrium sterni, which it had eroded. The left ventricle is dilated and hypertrophied. There were no pressure effects on trachea or bronchi, but the superior vena cava was thrombosed. I 228

From a charwoman aged 30, whose symptoms of aneurysm had lasted about three years.

318. This specimen shows a sacculated aneurysm of the transverse part of the aortic arch. At the upper part it contains a very thick layer of laminated clot.

An old specimen concerning which no further details can be found.

319. The transverse portion of the aortic arch is in this specimen converted into a thin-walled globular aneurysm the size of a large Tangerine orange. This compresses the trachea at its bifurcation, and also the commencement of the left bronchus. The walls are very atheromatous and in places calcareous, and attached to them posteriorly is a layer of laminated clot a quarter of an inch thick. E 48

From a bricklayer aged 53. There was no history of syphilis. At the *post-mortem* examination the lungs were found to be emphysematous and the bronchi dilated. There were also found some perihepatitis and granular kidneys.

(6) **Aneurysm of the Second and Third Parts of the Arch of the Aorta.**

321. The specimen shows a large aneurysm commencing immediately after the transverse arch has given off the innominate artery; the left carotid and left subclavian are given off from the sac. Posteriorly it was adherent to and had eroded the bodies of two of the upper dorsal vertebræ. The trachea and left bronchus were compressed by the sac, and the left innominate vein lay thrombosed upon it. The œsophagus was displaced but not compressed. The left lung was also compressed, the left margin being adherent to the sac, and can still be seen attached to it in the specimen. On section the sac is seen to be lined by dense laminated and organised clot nearly one inch thick. I 114

From a conjurer aged 53.

322. This specimen shows an aneurysm of the transverse and third part of the aortic arch. It has been opened posteriorly, and a blue glass tube inserted through the aneurysmal sac into the left bronchus. The œsophagus was also perforated, and there is disorganisation of the left lung.

An old specimen to which no further reference can be found.

(7) **Aneurysm of the Third Part of the Arch of the Aorta.**

323. The aorta shows atheroma most marked in its descending portion, which is somewhat dilated. Arising from its anterior surface is an

aneurysm the size of a Tangerine orange, nearly filled with laminated clot; this had ruptured into the first division of the left bronchus.

D 102

From a cab-driver aged 45, who died suddenly from profuse hæmoptysis.

324. This aneurysm, which rested on and slightly eroded the body of the third dorsal vertebra, had ruptured posteriorly, the blood tracking along either side of the œsophagus, beneath the crura of the diaphragm, into the peritoneal cavity, which contained 120 ounces of blood.

D 62

From a dock labourer aged 31, who stated that he had had syphilis a few years previously. His symptoms dated only from six weeks before death, when he began to be troubled with cough. He had been at work until seven days before death, which resulted from syncope. See *Trans. Clin. Soc.*, vol. xix, p. 266, where the case is described in full by Dr. Kidd.

325. This specimen shows a sacculated aneurysm the size of a small cocoanut, which had eroded the bodies of the second, third, and fourth dorsal vertebræ. It had also greatly compressed and flattened the left bronchus and to a slight extent the œsophagus. Owing to the compression of the bronchus destructive disease of the lung has occurred, and the organ is riddled throughout with large gangrenous trabeculated cavities, which in the recent condition contained thin foetid purulent secretion. The right lung was very œdematous and showed patches of broncho-pneumonia.

C 226

From a porter aged 38, who had contracted syphilis twenty-three years previously. The symptoms of aneurysm had lasted four years. He died of gradual exhaustion. See *Trans. Path. Soc.*, vol. xxxvi, p. 109.

(8) **Aneurysm of the Third Part of the Arch and the Descending Aorta.**

326. At the junction of the third part of the arch with the descending aorta can be seen a large sacculated aneurysm. It had eroded six of the dorsal vertebræ, and had caused sloughing ulceration through the posterior wall of the œsophagus.

A 31

From an engine fitter aged 40, in whom there was no history of syphilis.

(9) **Aneurysms of the Whole Arch.**

(a) *Fusiform Aneurysms.*

327. In this specimen the dilatation is nearly general, and the aneurysm to a large extent is filled with coagulum.

An old specimen to which no further reference can be found.

328. The great and general dilatation of the aorta seen is the result of extensive atheroma.

An old specimen to which no further reference can be found.

(b) Multiple Aneurysms.

329. This specimen shows an aneurysmal condition of the whole arch of the aorta. There is one enormous sac with thin, tough walls; and three secondary sacs, two anterior, forming during life tumours in the right and left second intercostal spaces, and a third involving the root of the innominate artery and compressing the right vagus and recurrent laryngeal nerve. The latter is flattened out upon its posterior surface. The aneurysm has also slightly flattened the lower half of the trachea. There is also great enlargement and hypertrophy of the heart. **E 93**

From a groom aged 66.

330. An aneurysm the size of a duck's egg is seen commencing about two inches above the valves and involving the orifice of the innominate artery. The whole of the aorta is atheromatous, and at the junction of the third part of the arch with the descending aorta are two other sacculated aneurysms projecting backwards. The first, the size of a greengage, presses on the left main bronchus; and the second, the size of a hen's egg, presses upon the first, producing the appearance of a bilobulated aneurysm, and also upon the œsophagus, opening by a small rent into its muscular wall. It ruptured into the left pleural cavity about two to three inches above the diaphragm. **D 87**

From a police-constable aged 42, who died suddenly in the out-patient room. The present illness had lasted seven weeks, the chief symptom being dyspnoea. He had also suffered, too, from rheumatic fever twice—firstly twenty years ago, and again eight years ago.

331. This specimen shows general dilatation of the whole of the aortic arch, and at the junction of the third part with the descending aorta a more or less saccular enlargement projecting posteriorly. This has been laid open, showing the thickened and atheromatous arterial wall.

An old specimen. No further reference to it can be found.

332. Immediately above the valves, which are healthy, the aorta is seen to be dilated, the dilatation extending as far as the commencement of the descending aorta. The intima is extremely atheromatous. In addition there are two sacculi, both posterior, one at the junction of the ascending and transverse portion, and the other in the centre of the transverse portion; both were filled with clot. The aneurysm had pressed on the trachea, causing stenosis. The remainder of the aorta is very atheromatous. **M 14**

From a coachman who died with pulmonary tuberculosis aged 61, and who presented symptoms of pressure on the trachea.

(10) Aneurysm of the Descending Aorta.

333. This specimen shows a saccular aneurysm starting from the posterior wall of the descending aorta and extending upwards. The bodies of the seventh, eighth, ninth, and tenth dorsal vertebræ, and part of the ninth and tenth ribs, were eroded. The lateral walls of the aneurysm are adherent to the right and left pleuræ. In the lower part of its left

wall there is a large longitudinal slit, through which the blood flowed into the left pleural cavity. **M 17**

From a watchmaker aged 40, in whom pain was the most prominent symptom. There was no history of syphilis. He died quite suddenly.

Aneurysm of the Innominate Artery.

334. The first part of the aorta shows a little atheroma, and immediately above the valves a small aneurysm the size of a pea can be seen. The origin of the innominate artery is thickened and larger than natural, and leads into an aneurysmal sac the size of a foetal head, originating from the anterior wall of the first part of the artery before its division into the carotid and subclavian arteries. The sac lies anterior to these vessels, and they can be seen upon its posterior wall. The left innominate vein was completely occluded, and the trachea constricted just above its bifurcation. The sac is seen to be lined with thick laminated clot. **L 87**

From a smith and fitter aged 36, who had been seven years in the army. No history of syphilis could be obtained. His illness started with cough and dyspnoea six months before death. At the *post-mortem* examination purulent bronchitis and oedema of lungs were present. The aneurysm formed a tumour extending from the upper limit of the pericardium to the top of the manubrium sterni.

SECTION IX.

DISEASES OF THE ALIMENTARY CANAL.

DISEASES OF THE TONGUE.

Tuberculous Ulceration.

335. The specimen shows a deep circular ulcer the size of a shilling in the middle line an inch and a half from the tip of the tongue. The edges are thickened, and the tissues in the neighbourhood indurated. Microscopical sections of the ulcer showed tuberculous changes and numerous tubercle bacilli. **C 121**

From a man aged 29, who died from chronic pulmonary tuberculosis and lardaceous disease. The larynx and intestines showed slight tuberculous ulceration. See *Trans. Path. Soc.*, vol. xxxvi, p. 184.

336. On the dorsum of tongue in its middle portion, and nearly in the centre, are two small, deep, irregular, ragged ulcers, probably tuberculous in nature. **K 1**

From a female aged 54, who died of tuberculosis of the lungs, larynx and intestines.

337. Three tuberculous ulcers of considerable size can be seen on the inferior surface of the tongue just below the tip, one to the left and

two to the right of the middle line. A fourth ulcer is situated in the centre of the left lateral border of the organ. **N 13**

From a male patient aged 42, who died of chronic pulmonary tuberculosis (see specimen No. 105) with terminal miliary tuberculosis. The larynx and intestines showed extensive tuberculous ulceration.

DISEASES OF THE TONSILS, PHARYNX, AND SOFT PALATE.

(1) Tuberculous Ulceration.

338. There is extensive ulceration of both tonsils. The glands below the ramus of jaw and in the cervical region were enlarged but not caseous.

K 89

From a man aged 28, who died of pulmonary tuberculosis, which had commenced one year and eleven months previously. There was a small tuberculous ulcer on the right vocal cord, and several in the intestine.

339. Some calcareous nodules can be seen in a pocket of the ulcer on the right tonsil. Enlarged caseating glands were found under the ramus of the right jaw, and running down the right cervical region.

K 88

From a youth aged 18, who died of chronic pulmonary tuberculosis of six months' duration. There was also extensive ulceration of the intestines. The larynx was natural.

340. The whole arch of the soft palate, except at the base of the uvula, is superficially eroded, the erosion extending along both lingual attachments. The posterior surface of the uvula and the whole of the inferior surface of the soft palate is also ulcerated, as well as the posterior pillars of the fauces. Above, the ulceration spreads to the orifices of the Eustachian tubes and posterior nares; below to the upper border of the cricoid, and in front to the lateral linguo-epiglottidean ligament. There are also one or two superficial ulcers on the right tonsil. **K 27**

From a man aged 31, who died of chronic pulmonary tuberculosis, with extensive tuberculous ulceration of the larynx and intestines.

341. Two large circular ulcers, together with small tuberculous nodules, can be seen on the posterior wall of the pharynx. There is also extensive tuberculous ulceration of the larynx. **C 48**

From a man aged 32, who died of chronic pulmonary tuberculosis of eighteen months' duration. Some ulceration of the intestines was also present.

(2) Malignant Ulceration of Pharynx.

342. There is a large irregular cavity occupying the right half of pharynx, through which the superior cornu of the thyroid is exposed. The cavity is formed by the ulceration of a primary carcinoma of the pharynx. The trachea is constricted by the growth, necessitating tracheotomy, the wound due to which can be seen. **G 273**

From a man aged 65, who died with secondary growths in the glands of the neck, the lungs and the liver.

DISEASES OF THE ŒSOPHAGUS.

(1) Congenital Diverticulum.

343. On the anterior surface of the œsophagus extending forwards in the neighbourhood of the left bronchus, a diverticulum about an inch long is seen. At its orifice it is the size of a little finger, but tapers off gradually to the size of a cedar pencil. Its walls and edges are quite healthy and from its appearance it would seem to be congenital in nature. **F 69**

From a male aged 42, who died of pulmonary tuberculosis.

(2) Traction Diverticulum.

344. A red glass probe shows the opening of a small diverticulum which comes from the anterior wall of the œsophagus opposite the right bronchus, just below the bifurcation of the trachea, and which runs almost directly backwards. There are some enlarged and adherent glands in the neighbourhood, and from the puckered appearance of the opening of the diverticulum it is probable that it was produced by traction. **L 226**

From a labourer aged 36, who died of chronic pulmonary tuberculosis.

345. On the anterior surface of the œsophagus, half an inch below the bifurcation of the trachea, and opposite the right bronchus, can be seen three openings with smooth edges. These lead into a small cavity which passes upwards and anteriorly, and is apparently a pouch in the œsophageal wall. Some glands at the bifurcation of the trachea are adherent just at this spot, and it is probable that the pouchings have been produced by traction. **L 225**

From a male patient aged 45, who died of chronic pulmonary tuberculosis.

(3) Simple Ulceration.

346. The ulcers are small and not indurated at their edges, which are ragged and slightly raised. There is no infiltration of the submucous tissue forming the base of the ulcers. The ulceration extended from two inches below the commencement of the œsophagus to the cardiac orifice of the stomach. In the substance scraped off tubercle bacilli were found, but microscopical sections did not confirm the diagnosis. **L 219**

From a male aged 32, who died of chronic pulmonary tuberculosis complicated by a pyopneumothorax.

(4) Tuberculous Ulceration.

347. The specimen shows the middle and lower portions of the œsophagus. Numerous roughly oval ulcers of a ragged appearance, and freely intercommunicating, are seen in the upper three inches, while below this the ulcers are less numerous. The tissue between the ulcers is infiltrated, and contains areas of caseation. On microscopic section numerous typical B.H.C.

tubercles with giant-cells were found beneath the still intact epithelium, and tubercle bacilli were demonstrated between the epithelial cells and also in the necrotic areas at the base of the ulcers. The areolar tissue around the œsophagus was healthy, and there were no caseous glands from which the process could have spread in contiguity. The œsophagus was probably infected by the passage of sputum through its lumen.

O 100

From a man aged 54, who died of chronic pulmonary tuberculosis complicated by a left pyopneumothorax, and who *post mortem* was found to have extensive ulceration of both small and large intestines. During life the pharynx and fauces appeared healthy, but permission to examine the larynx and adjacent parts *post mortem* could not be obtained. See *Trans. Path. Soc.*, vol. liv, p. 84.

348. About half an inch from the commencement of the œsophagus an elongated ulcer, oval in shape and two inches in length, is seen. It almost encircles the organ. The ulcer has thickened, considerably raised, and deeply undermined edges. Upon its floor the muscular tissue of the œsophagus is apparently exposed.

L 91

From a man aged 29, who died of chronic pulmonary tuberculosis with terminal miliary tuberculosis, and with tuberculous lesions in the larynx, œsophagus and intestines.

Microscopically, in a patch of caseation adjacent to the wall of the ulcer, very numerous tubercle bacilli were seen.

DISEASES OF THE STOMACH.

Tuberculous Ulceration.

349. The stomach is deeply engorged, and there is considerable ash-grey pigmentation. About the middle of the lesser curvature, and on the posterior aspect, is a small ulcer about the size of a threepenny piece. The edges are sharp and the floor caseous. In the caseous material tubercle bacilli were found, and caseous glands are to be seen loosely adherent to the walls of the stomach in the neighbourhood.

I 145

From a man aged 35, who died with tuberculous disease of the lungs, the pericardium (Specimen 209), and other serous membranes, and with multiple tuberculous tumours of the brain. See *Trans. Path. Soc.*, vol. xlv, p. 73.

DISEASES OF THE INTESTINES.

A. SIMPLE ULCERATION.

Acute Ulcerative Enteritis.

350. A portion of the lower part of the ileum is shown. It exhibits much diffuse ulceration, and in the recent state was deeply injected but without hæmorrhages. The wall of the gut is thickened, the peritoneum covering it smooth. This condition of the gut was present over an area a foot and a half long, ending one foot above the ileo-cæcal valve.

In the rest of the ileum and in the jejunum were some smaller ulcerated tracts, while the whole of the small intestine was markedly inflamed. The large intestine and rectum were natural. **K 90**

From a woman aged 35, who suffered from old rheumatic endocarditis and heart failure (See Specimen 232). For eight days before death, pain, diarrhoea, and oedema were present.

B. TUBERCULOUS ULCERATION.

(1) Tuberculous Ulceration of Small Intestines.

(a) Specimens showing Stages in the Tuberculous Process.

351. The specimen shows a portion of the ileum in which the Peyer's patches are plainly seen. In most of them small tuberculous infiltrations are visible, in some of which caseation has commenced, giving rise to small ulcers. **L 81**

From a male aged 15, who died of rapid pulmonary tuberculosis with pneumothorax.

352. This specimen shows the formation of the ulcers in the follicles and Peyer's patches, and also indicates the way in which the disease spreads transversely by means of the lymphatics.

An old specimen to which no further reference can be found.

353. This specimen shows a piece of the ileum, which was studded from end to end with small tuberculous ulcers and tubercles. The Peyer's patches were not affected. **K 146**

From a woman aged 22, the subject of chronic pulmonary tuberculosis and amyloid disease.

- 354 and 355. The ulcers shown in these specimens are of a somewhat chronic type. They are placed transversely; the edges are raised, thickened, and over-hanging. Beneath certain of them tuberculous deposits can be seen in the subperitoneal tissue. **M 18**

From a female aged 33, who died of chronic pulmonary tuberculosis, and who was found *post mortem* to have tuberculous disease of the intestines and a fatty cirrhotic liver.

356. This specimen shows numerous tuberculous ulcers of typical appearance. The thickened edge, the nodulated warty base, and the tubercles on the peritoneal surface form a very characteristic picture. **O 190**

From a woman aged 27, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx and intestines.

357. This specimen shows some large irregular ulcers in the ileum, similar in character to and from the same patient as those seen in the preceding specimen; one of them, however, completely encircles the gut. **O 190**

From a woman aged 27, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx and intestines.

358. This specimen shows numerous typical tuberculous ulcers affecting the intestinal wall. The thickening of the edges and the warty character of the base are very well seen. **N 255**

From a male aged 21, who died with chronic pulmonary tuberculosis with tuberculous lesions of the intestines and peritoneum.

359. This specimen shows large chronic transverse ulcers, completely encircling the gut.

An old specimen to which no further reference can be found.

(b) Specimens showing Secondary Constriction of Gut.

360. In the centre of the specimen is a large chronic tuberculous ulcer. The walls are extremely thickened, and greatly puckered and contracted. The lumen of the gut was constricted to half its natural size. **K 215**

From a female aged 31, who died of pulmonary tuberculosis with tuberculous lesions in the intestines.

(c) Specimens showing Tuberculous Ulceration of somewhat Abnormal Type.

- 361 and 362. The ulcers seen in this specimen have an unusual appearance. They are greatly raised as a whole above the mucous membrane, their bases as well as edges being much thickened. They were intensely engorged, and one of them was as large as a florin. On the peritoneal surface of the intestines there was over each ulcer a considerable nodule of massed tubercle, the tubercles spreading thence into the surrounding lymphatics. There was no local or general peritonitis. **K 166**

From a man aged 45, who died of chronic and miliary tuberculosis of the lungs. The larynx was also diseased. The duration of his illness was eight months.

363. A large oval, transversely placed ulcer is seen, which lays bare the peritoneum in the centre. The edges are raised and ulcerating, presenting a layer of tuberculous material a quarter of an inch wide. **I 130**

From a patient aged 47, the subject of chronic pulmonary tuberculosis of twelve months' duration. The larynx was healthy.

364. This specimen shows one large ulcer placed longitudinally in the axis of the bowel in a Peyer's patch. It has irregular edges, and a somewhat warty base. Several smaller ulcers are also visible in the neighbourhood.

An old specimen to which there is no further reference.

(2) Tuberculous Ulceration of Cæcum and Appendix.

365. The lower part of the ileum is occupied by large ulcers communicating with one another and having small granulations at their base. The appendix is enlarged, and ulcerated from apex to base. **I 141**

From a woman aged 25, who died of chronic pulmonary tuberculosis with tuberculosis of lungs, larynx, trachea, and intestines.

366. The specimen shows very chronic tuberculous ulceration of the lower end of the ileum, the cæcum, and the appendix. The disease is very chronic, the walls of the gut being greatly thickened and indurated.

K 94

From a woman aged 34, who died with tuberculosis of the lungs, intestines, and larynx, and lardaceous disease of the liver and spleen.

367. The cæcum contains some large irregular ulcers, and in addition numerous small masses of tuberculous infiltration. The appendix is studded throughout with small tuberculous nodules, which in some places have broken down, forming small ulcers.

O 190

From a woman aged 27, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines and peritoneum. See also Specimens 356 and 357 from the same patient.

(3) Tuberculous Ulceration of Large Intestines.

368. This specimen shows very large irregular tuberculous ulcers in the colon. The ulcers have raised, undermined edges, and caseous material forms their base; they extend nearly round the bowel and had constricted its lumen.

K 197

From a man aged 26, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx and intestines.

369. The specimen shows marked tuberculous ulceration of the large intestines. Certain discrete ulcers are seen, and in addition a large ulcerated patch, occupying the whole circumference of the gut, and extending for about three inches longitudinally.

N 120

From a female patient aged 29, who died with chronic pulmonary tuberculosis. Tubercular ulceration commenced at the upper part of the jejunum, and was present in a marked degree from the middle of the ileum to the anus. The mesenteric glands were all enlarged and caseous.

(4) Tuberculous Ulceration of Rectum.

370. The mucous membrane of the rectum is studded with small, closely set ulcers. The ulcers are irregular in shape, deeply punched out, with greatly thickened edges. The whole wall of the gut is thickened and infiltrated.

K 8

From a female patient aged 28, who suffered from chronic pulmonary tuberculosis, with tuberculous lesions in the larynx and intestines, most marked in the large intestine.

371. The specimen shows the anus and lower portion of the rectum. The whole is riddled with tuberculous ulceration, which extends right down to the anus.

O 116

From a girl aged 14, who died of chronic pulmonary tuberculosis, tuberculous laryngitis, and very extensive tuberculous disease of the intestines. Tuberculous ulcers were found in the duodenum, jejunum, and ileum,

while the large intestine from cæcum to anus was extensively ulcerated, the appearance in places being that of ulcerative colitis. The tuberculous nature of the process was, however, proved by the fact that the glands immediately in contact with the surface of the gut all showed nodules of caseation. The appendix was extensively diseased. The patient suffered during her stay in the hospital (4½ months) with profuse and intractable diarrhœa.

372. The specimen shows three tuberculous ulcers, one circular and the others placed transversely. The ulcers are shallow, with irregular, thickened edges. K 70

From a male aged 42, who suffered from pulmonary tuberculosis and cirrhosis of the liver. At the *post-mortem* tuberculous lesions were found also in the larynx and intestines. The spleen was enlarged, and the abdomen full of serous fluid.

TUBERCULOUS FISTULA-IN-ANO.

373. This specimen shows tuberculous ulceration of the rectum with but little infiltration. There is also a tuberculous fistula which opens internally just above the internal sphincter. M 207

From a male aged 45, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines.

GREAT CONSTRICTION OF THE ILEO-CÆCAL VALVE.

374. This specimen shows a remarkably small ileo-cæcal valve, admitting barely the tip of the little finger, and of button-hole shape. The edges are smooth and rounded, and the walls thickened. Lying in the end of the ileum, and forming a ball-valve, was a small hard scybalum, the size of a hazel-nut, which was found on section to be a cherry-stone surrounded by two laminæ, one fæcal and the other possibly phosphatic. I 98

From a woman aged 20, who died of chronic pulmonary tuberculosis, with tuberculous disease of the liver, intestines, generative organs, and of all the serous membranes. For further history of the case see Specimen 405 and *Trans. Path. Soc.*, vol. xlv, p. 112.

SECTION X.

DISEASES OF THE PERITONEUM, OMENTUM, AND MESENTERY.

DISEASES OF THE PERITONEUM.

Showing Tubercles on the Peritoneum of the under surface of the Diaphragm.

375. This specimen shows the peritoneum covering the under surface of the diaphragm. It is studded all over with tubercles, which in places

have become confluent and commenced to caseate. The pleural surface of the diaphragm is natural. The remainder of the peritoneum was studded with tubercle, though not to the same extent, excepting over the right kidney. The peritoneal cavity contained twenty ounces of slightly turbid fluid. **M 27**

From a man aged 41, who died of chronic pulmonary tuberculosis with acute tuberculous peritonitis. There were also tuberculous disease of the fourth rib and lardaceous disease of the liver, spleen, kidneys, and intestines. There was no tuberculous ulceration of the intestines.

Showing Tuberculous Infiltration of the Subperitoneal Lymphatics of the Small Intestine.

376. This specimen shows a portion of the small intestine with the mesentery attached, and a caseating mesenteric gland. On the peritoneal surface of the gut can be seen the lymphatic vessels, infiltrated with tuberculous masses, running through the mesentery to reach the lymphatic gland. **M 109**

From a male aged 26, who died from chronic pulmonary tuberculosis. *Post mortem* there were present tuberculous lesions in the intestines and mesenteric glands with some chronic peritonitis. There was also present a fatty and cirrhotic liver.

DISEASES OF THE MESENTERY.

Showing Deposits of Malignant Disease in the Lymphatics of the Mesentery.

377. This specimen shows a small piece of the ileum distended, with its mesentery still attached. The mesentery and the peritoneal surface of the gut are both studded with numerous small white plaques having the appearance of tubercles, but which are really deposits of new growth. **M 200**

From a woman aged 38, who died of malignant disease of the stomach with secondary deposits in the omentum, mesentery, peritoneum and pleura.

Showing Tuberculosis of the Mesenteric Glands.

378. In this specimen the mesentery is shown with the attached bowel. In the mesentery the lymphatics are seen to be filled with tuberculous deposit, and to lead to enlarged caseating mesenteric glands. **I 255**

From a boy aged 17, who died of chronic pulmonary tuberculosis with extensive tuberculous lesions in the intestines.

379. This specimen shows a large bunch of tuberculous mesenteric glands matted together. In some tubercles can be seen, and in others commencing caseation. (The appearance of the specimen has been somewhat altered by the spirit.) **I 179**

From a man aged 49, who suffered from fibroid tuberculosis of the lungs,

terminated by acute miliary tuberculosis affecting the lungs, pleura and peritoneum. Great ulceration of the intestines was also found *post mortem*.

DISEASES OF THE OMENTUM.

Showing Tuberculous Infiltration.

380. This specimen shows a piece of omentum stretched upon a plate of black glass. The omentum is seen to be studded closely with small miliary tubercles. **K 10**

From a man aged 24, who died of chronic pulmonary tuberculosis, with a few tuberculous ulcers in the lower part of the ileum. Scattered miliary tubercles were also seen in the capsule of the spleen and in the kidneys.

381. The omentum is seen to contain large, irregular, raised masses of tubercle. Similar nodules are present in the peritoneum covering the bowel, but elsewhere the tuberculous masses are much smaller. **K 165**

From a man aged 18, who died of chronic pulmonary tuberculosis with a left pyopneumothorax.

SECTION XI.

DISEASES OF THE LIVER, SPLEEN, KIDNEYS, AND SUPRA-RENALS.

DISEASES OF THE LIVER.

Caseous Tuberculosis of the Capsule of the Liver.

382. This specimen shows a portion of the liver with its capsule. The latter is seen to be much thickened and to be filled, at its upper part especially, with yellow caseating material. The surface of the capsule is rough and shaggy. **L 77**

From a woman aged 22, who suffered from tuberculous disease of the Fallopian tubes, ovaries and uterus, and who died from acute general tuberculosis especially affecting the serous membranes.

Lardaceous Disease of the Liver.

383. This specimen shows a section of a lardaceous liver. It is firm to the touch and waxy in appearance. The waxy material is seen to be situated in the middle zone of the lobules.

No further reference can be found to this specimen.

Nutmeg Liver.

384. The specimen shows a section through the liver, which weighed forty-four ounces, and presents the typical appearances of a nutmeg liver.

O 82

From a boy aged 16, who died of mitral stenosis.

385. The surface of the liver presents in places, especially in the left lobe, a peculiar bossed appearance, the bosses being yellow in colour. On section the yellow areas appear mottled and withered, while the sunken red portions around have the ordinary appearance of liver tissue. The organ weighed forty-two ounces.

M 164

From a boy aged 16, who died of acute caseous tuberculosis with tuberculous lesions in the intestines. Microscopically the condition proved to be one of fatty cirrhosis.

Specimen of Liver showing great Dilatation of Hepatic Veins.

386. The large orifices seen in the section of the liver are the sections of very dilated hepatic veins.

D 216

From a case of stenosis of all the cardiac orifices. For a description of the case see Specimen 241.

Streptothrix Disease of the Liver.

387. This specimen shows the right lung and the right lobe of the liver laid open. The base of the lung and the upper surface of the liver are generally adherent to the diaphragm, though in places the latter was separated from the liver by abscess cavities, two of which had been opened during life. The section of the liver shows numerous areas of caseation, partly firm and partly broken down to form small abscess cavities. Where the caseous masses are still firm they are separated from each other by pale gelatinous-looking material. On examining the the pus yellowish-white granules were seen, which on microscopical examination proved to be composed of a Gram-staining mycelium, showing a marked tendency to break up into minute round bodies, probably spores. (For a full description of the case see *Transactions of the Pathological Society*, 1901, p. 20).

M 30

From a boy aged 17, who on admission presented signs of fluid at the right base. Exploration was negative. Three months after first symptoms a fluctuating tumour developed over the sixth rib. This was incised; a few drachms of pus escaped, and the opening was thought to communicate with a cavity in the lung. Two months later another exploratory incision was made in the eighth space in the mid-axillary line, and more pus evacuated; the cavity was found full of honeycombed spongy tissue. After a few days the liver was found to be enlarged and the abdomen distended; jaundice developed, and the boy died six months after the commencement of symptoms. At the autopsy the exploratory incisions were found to have struck small abscess-cavities between the surface of the liver and the diaphragm.

388. The specimen shows a longitudinal section through the right lung,

diaphragm, liver, and right kidney. The main disease consists of a large caseous mass (circular in section) invading the right lobe of the liver, but not reaching the anterior surface of the organ. The superior surface was adherent to the diaphragm, and through this the growth had spread, invading the pleura and laying bare the four lower ribs from the spine to a point just beyond their angles. The extreme base of the right lung was also infiltrated to a very slight extent, some small caseous nodules being here visible in the specimen. The mass in the liver has a uniformly caseous appearance, and is generally honeycombed. The caseous areas are separated in places by semi-gelatinous material.

M 192

From a bricklayer aged 32, who died in an extremely emaciated condition after an illness of eight months' duration. During life the signs in the chest were those of a right pleural effusion, but in the sputum the ray fungus was found. Some time before death an abscess had been opened below the left hip, and in the pus actinomycotic grains were discovered. Later several other abscesses, all containing the characteristic granules, developed on the surface of the body. *Post mortem* abscesses were found in the liver, pleura, brain, gastro-splenic omentum, and in the glands at the fork of the trachea.

For streptothrix disease of the lungs see Specimens 89 and 90.

Diffuse Sarcoma of Liver.

389. This specimen shows a section through the liver which is light yellow in colour, suggesting the possibility of fat. On microscopical examination, however, it was found to be sarcomatous, the new growth having almost entirely replaced the liver tissue. The organ weighed 144 ounces.

O 106

From a man aged 24, who died of lympho-sarcoma of the mediastinum, with secondary growths in the liver, pancreas, and cardiac glands.

DISEASES OF THE SPLEEN.

Caseous Tuberculosis of the Spleen.

390. The surface of the spleen is seen to be nodular, owing to the protrusion through the capsule of a large number of caseous nodules of various sizes. On section the organ is found to be infiltrated with large, firm, caseous, tuberculous masses, the interstices containing tubercles of miliary size.

K 82

From a little girl aged 5. For history of the case see No. 112.

391. The spleen is much enlarged; it weighed seventeen and a half ounces. The capsule is thickened and granular. Scattered through the substance of the organ are caseous tuberculous deposits, varying in size from a pea to a pin's head.

K 20

From a man aged 32, who died of acute miliary tuberculosis with tubercles in the spleen, kidneys, brain, and lungs. There were old foci of disease in the right lung.

Lardaceous Disease of the Spleen.

392. This specimen shows a section of liver which has been treated with iodine. The lardaceous material is stained a rather deep mahogany colour, showing out against the lighter colour of the spleen tissue.

No further reference can be found to this specimen.

Infarct of the Spleen.

393. The spleen shown cut open weighed fifteen ounces. It contains one large and several small infarcts. The large infarct is whitish in colour, and the capsule of the spleen over it is raised, thickened, and irregular.

M 113

From a man aged 21, who died of malignant endocarditis with emboli in the spleen, kidneys, and right and middle cerebral arteries.

DISEASES OF THE SUPRA-RENAL GLAND.

Malignant Disease of the Supra-renal Gland.

394. This specimen shows the right kidney and supra-renal gland laid open. Together they weighed twenty-two ounces. The supra-renal is represented by a large irregular nodular growth, while at the lower end of the kidney there is also an irregular deposit.

M 220

From a man aged 44, who died of lympho-sarcoma of the lungs with secondary growths in the liver, pancreas, right supra-renal, and kidney.

Tuberculous Diseases of the Supra-renal Gland.

395. The specimen shows a section through the right supra-renal gland and the right kidney. The supra-renal is seen to be about twice its natural size, and to be almost replaced by numerous caseating tuberculous patches, which vary in size from that of a small bean to half the size of a pea. The left supra-renal was of natural size, but contained one small tuberculous mass in its centre.

O 109

From a man aged 50, who died with cirrhosis of the liver, perihepatitis, and perisplenitis. The lungs showed somewhat extensive but seemingly quiescent tuberculous disease. At both bases, however, there was some recent pleurisy.

396. This specimen shows the right supra-renal greatly enlarged, and containing masses of firm, caseous, tuberculous material.

K 10

From a man aged 24, who died of chronic pulmonary tuberculosis.

DISEASES OF THE KIDNEY.

Caseous Tuberculosis of the Kidney.

397. The pelvis of the left kidney is seen to be the seat of advanced caseating tuberculosis, while the calices and in many places the kidney substance are in a similar condition, the disease having extended to them from the pelvis. In addition to the large tuberculous abscesses thus formed in the kidney substance, several discrete caseating tubercles

may also be seen. The dilated ureter is also the seat of tuberculous ulceration.

M 137

From a man aged 35, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines, peritoneum, left supra-renal, and genito-urinary tract.

398. The whole urinary tract is seen to be the seat of extensive tuberculous disease. The kidney is greatly enlarged; the pelvis is full of caseous material, and from it prolongations extend through the kidney substance. The cortex is greatly swollen, and contains masses of tuberculous deposit, and towards the upper part of the kidney there is a large thick-walled abscess cavity lined with thick caseous matter. The ureter is immensely thickened throughout its whole length by infiltration of caseous material, its walls being one third of an inch thick. The mucous membrane of the bladder is also greatly thickened, and covered with a layer of shreddy caseous material.

K 152

From a girl aged 13½, who died of chronic pulmonary tuberculosis.

Lardaceous Disease of the Kidney.

399. The kidney shown in section is seen to be greatly enlarged, (the two kidneys together weighed 22 ounces). The cortex is swollen, and is composed of white waxy material, while the pyramids can hardly be distinguished. The capsule stripped easily. On the addition of iodine the kidneys stained a deep mahogany brown.

L 1

From a man aged 33, who died of chronic pulmonary tuberculosis with lardaceous disease of the spleen, intestines, and kidneys.

Renal Calculi.

400. The specimen shows the right kidney cut open and disclosing the calices dilated and filled with stones. The pelvis of the kidney was of natural size, and was filled with a coralline stone an inch and a third long, and at one end the size of a small marble. The calices were all dilated, and formed a series of cavities filled with stones. In all one hundred and seventy-one stones were counted, but this was less than the total number. The stones were of a lightish yellow colour and were nearly all faceted; they varied in size, but most were the size of hemp-seeds. Exteriorly the kidney was natural, and the stones were discovered on cutting into the organ. The ureters, bladder, and left kidney were natural.

O 99

From a patient aged 21, who died from pulmonary tuberculosis and tubercular laryngitis. Specimen No. 181 shows the lung from this patient.

Hydronephrosis secondary to Renal Calculus.

401. This specimen shows numerous large cysts (the greatly dilated calices) filling up the centre of the left kidney. The pelvis is dilated, and contains a large, irregular, branching stone, which had blocked the ureter and caused the hydronephrosis. The zone of kidney substance

still remaining on the periphery of the organ showed lardaceous degeneration on the addition of iodine. **M 93**

From a man aged 34, who died of chronic pulmonary tuberculosis with lardaceous disease of the liver, spleen, and kidneys.

Hydatid Disease of Kidney.

402. This specimen shows the right lung and the cyst in the right kidney. The walls of the cyst are thickened and calcareous, and lined with yellow pultaceous material. The cavity was filled with numerous daughter cysts, in which hooklets were found. The cyst appeared to be situated in the right kidney, of which only the lower third can be seen, the upper portion being more or less destroyed by the enlargement of the tumour. The lung is contracted and shows old tubercular lesions, with much fibrosis. The bronchi are considerably dilated. **I 79**

From a man aged 43, who suffered from chronic pulmonary tuberculosis of fifteen years' duration, and died of exhaustion after frequent attacks of hæmoptysis. In the left lung a pulmonary aneurysm was found.

Infarct of Kidney.

403. The specimen shows several recent anæmic infarcts. **N 196**

From a man aged 46, who suffered with chronic bronchitis and emphysema, and *post mortem* was found to have thrombosis of the coronary veins, and infarcts in the kidneys, spleen, intestines, and testicle.

SECTION XII.

DISEASES OF THE GENERATIVE ORGANS.

A. FEMALE.

Tuberculous Disease of the Ovaries.

404. Both ovaries are seen to be much enlarged and to contain masses of caseous tuberculous material. In the left ovary one mass is as large as a filbert. **I 119**

From a woman aged 45, who died of chronic pulmonary tuberculosis.

405. This specimen shows the uterus, rectum, bladder, both ovaries, tubes, and a small piece of intestine, which were all adherent together. The right ovary forms a hollow cavity the size of a cricket ball, filled with dirty yellow pus, and with very thick walls. In front of it is a short convoluted and thickened Fallopian tube. A loop of ileum is attached to the ovarian tumour, and was found to communicate directly with the cavity of the ovary. Between the tumour and the pelvic

wall there was a shallow abscess cavity which communicated by a sinus with the bladder. On the left side there is no trace of broad ligament; the ovary is hollow and suppurating, forming a tumour the size of a walnut, and in communication with it is a sinus from the sigmoid flexure. The Fallopian tube of this side is also much thickened. Scrapings from the caseous wall of the left ovary showed tubercle bacilli.

I 98

From a woman aged 20, who gave a history of cough for two years. Three months before death the abdomen became distended and tympanitic, with rigidity and tenderness. The temperature rose to 103° and 104° and assumed an irregular hectic type. Ascites was noticed one month before death, and the physical signs in the lungs gradually increased. Two weeks before death headache and delirium supervened, and optic neuritis was discovered. The patient died in a comatose condition without evidence of paralysis. At the autopsy signs of tuberculous disease were found in the lungs, liver, intestines (Specimen 374), generative organs, and in all the serous membranes. See *Trans. Path. Soc.*, vol. xlv, p. 112.

Tuberculous Disease of the Fallopian Tubes.

406. The specimen shows the uterus, ovaries, and Fallopian tubes. The right tube is somewhat swollen, and was found on section to be in an early stage of tuberculous infiltration, the mucous membrane being swollen, and caseous material filling the lumen of the tube. On the left side the condition is similar but more advanced. The tube is considerably enlarged, reddened, and tortuous, and on section showed marked caseous degeneration of the mucous membrane, and occlusion of the lumen with caseous debris. The peritoneum in the neighbourhood of the Fallopian tubes showed a few recent tubercles, but was otherwise unaffected. The uterus and ovaries are normal. **N 163**

From a girl aged 14, who suffered from chronic pulmonary tuberculosis, and tuberculous disease of the trachea and intestines. Both kidneys also showed early tubercle.

407. This specimen shows both Fallopian tubes tortuous, thickened, and filled with caseous material. The portions of the tube abutting on the uterus are not involved, and both ovaries appear healthy. **L 249**

From a woman aged 30, who died of chronic pulmonary tuberculosis with tuberculous lesions in the larynx, intestines, peritoneum, and Fallopian tubes.

Tuberculous Endometritis.

408. The specimen shows the uterus to be distinctly enlarged, and with its mucous surface highly irregular and eroded. The cavity of the uterus when first opened was found to be filled with caseous broken-down debris, in which innumerable tubercle bacilli were found. Both Fallopian tubes showed evidence of old, probably tuberculous, disease. The peritoneum around was adherent, but no tubercles were found on it. The bladder was natural. **N 110**

From a woman aged 36, who suffered from chronic pulmonary tuberculosis and tuberculous laryngitis.

409. This specimen shows the uterus and the Fallopian tubes. The endometrium is thickened and covered with caseous material, and on removing this the wall of the uterus was found to be ulcerated as far as the internal os. Both tubes in their outer part are thickened and filled with caseous material containing tubercle bacilli, and at either fimbriated extremity there is a globular mass of similar material. The ovaries were natural. **L 250**

From a woman aged 20, who died of chronic pulmonary tuberculosis with tuberculous lesions in the intestines, peritoneum, and generative organs.

410. In this specimen the upper two-thirds of the cavity of the uterus is seen to be lined with irregular masses of caseous material, in places the uterine wall being infiltrated for a sixteenth of an inch in depth. The tuberculous disease extends into the left Fallopian tube, which at its free end is considerably swollen and converted into a tube full of pus, and adherent to the left ovary. The latter forms a thin-walled cyst the size of an orange, full of caseous matter. The right Fallopian tube commences to be caseous about one inch from the uterus, and for the rest of its course is considerably swollen and filled with caseous matter. It is, however, not adherent to the right ovary, which is healthy. **M 185**

From a woman aged 26, who suffered from chronic pulmonary tuberculosis and a left pyopneumothorax. Tuberculous lesions were present in the larynx and intestines.

B. MALE.

Tuberculous Disease of Testis and Epididymis.

411. The specimen shows considerable enlargement of the organ, the enlargement chiefly affecting the epididymis. The latter is almost entirely converted into one large cheesy mass, while similar but smaller masses are seen in the body of the testicle, as well as numerous more recent tubercles. **N 237**

From a man aged 48, who suffered from chronic pulmonary tuberculosis. In addition to tuberculosis of the testicle, both vesiculæ seminales, the bladder, and the prostate all showed tuberculous disease.

412. This specimen was removed about three weeks before death from a man aged 37, who died of chronic pulmonary tuberculosis, but with secondary lesions only in the generative organs. The specimen shows that the epididymis in its upper two-thirds is entirely converted into a caseous mass. The lower third is natural. The testicle, except for a small spot in the hilum, is free from disease. The layers of the tunica vaginalis are separated for about a quarter of an inch and filled with serous fluid (a hydrocele). Extending backwards and downwards from the middle of the epididymis is a mass the size of a big walnut filled with caseating material. It constituted a tense tuberculous abscess. After death, when the prostate and vesiculæ seminales were cut open, they were all found to show tuberculous disease. The bladder and right testicle were natural. **O 60**

413. This specimen shows a tuberculous testicle and vas deferens almost completely filled with caseous material. **K 175**

From a man aged 30, who died of chronic pulmonary tuberculosis with tuberculous lesions in the left knee-joint, testicle, and corpora quadrigemina. The other testicle had been removed during life.

Tuberculous Disease of the Vesiculæ Seminales.

414. This specimen shows the vesiculæ seminales greatly enlarged. They are opened and are seen to be filled with caseating tuberculous material.

An old specimen of which no further record can be found.



