Report on the work of the Pathological Department of the Brompton Hospital during the three years April, 1900, to April, 1903.

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REPORT

ON THE WORK OF THE

PATHOLOGICAL DEPARTMENT

OF THE

BROMPTON HOSPITAL

DURING THE THREE YEARS

April, 1900, to April, 1903.

by Hartley
P. Horton-Smith, M.D. F.R.C.P.

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REPORT

ON THE WORK OF THE

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ROYAL COLLEGE OF SURGEONS OF ENGLAND
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DURING THE THREE YEARS

April, 1900, to April, 1903.

1. During the past three years 89 new formalin specimens have been added to the Museum.

2. With the help of Dr. Mullings, late Assistant Resident Medical Officer, the whole of the Museum has been re-catalogued, and a tender from Messrs. Adlard & Son for the publication of the MS. has been accepted by the Committee of Management. The work is now in the printer's hands.

3. The following is an account of the *Post-mortem* examinations performed during this period, together with Special Tables relating to the cases of Acute Caseous Tuberculosis, Chronic Pulmonary Tuberculosis, Pulmonary Aneurism, Pneumothorax, Bronchiectasis, and Malignant Disease of the Lungs.

TABLE I.

SHOWING THE NUMBER AND NATURE OF THE *POST-MORTEM* EXAMINATIONS PERFORMED.

TOTAL NUMBER OF POST-MORTEMS, 379.
Male, 263; Female, 116.

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
I.—DISEASES OF THE RESPIRATORY SYSTEM.				
Papilloma of Larynx	1	...	1	Male, aged 3 (N 116) A sessile papilloma, size of a small marble, grew from left vocal cord, and completely blocked larynx. Tracheotomy was performed. Patient died quite suddenly in his sleep, without obvious cause. In the left lung there was slight chronic pulmonary tuberculosis.
Syphilitic Stenosis of Larynx	1	...	1	Male, aged 30 (O 166). The larynx showed old syphilitic ulceration and scarring, with resulting stenosis. The trachea also showed scarring. Chronic pulmonary tuberculosis was found, especially in the right lung, but not of a high degree.
Ulceration of the Trachea and Bronchi of doubtful nature	1	...	1	N 258. Schoolboy, aged 6½. The lower portion of trachea and upper 1½ in. of both bronchi showed marked ulceration, in the right bronchus three cartilaginous rings being exposed. Broncho-pneumonia and recent septic infarcts of the spleen were also found. The nature of the disease was obscure. Sections showed no sign of tubercle, and cultures of the spleen remained sterile.
Pulmonary Tuberculosis	197	87	284	For an analysis of the cases of chronic pulmonary tuberculosis and of those of the more acute caseous type, see Tables II. and IV.
Diabetes with Chronic Pulmonary Tuberculosis	1	...	1	O 131.
Chronic Pulmonary Tuberculosis with extensive Atheroma, leading to Gangrene of both Feet	1	...	1	O 66. Occurred in a blacksmith, æt. 59.

TABLE I.—*continued.*

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
Acute Miliary Tuberculosis of Lungs	...	1	1	N 189. A domestic servant, æt. 26. Besides the lungs, which were thickly crowded with miliary tubercles, a few were found in the kidneys, but in no other organ. Examination of brain not permitted, but no sign of meningitis clinically. The only older lesion found was a small calcareous posterior-mediastinal gland.
Broncho-pneumonia	1	2	3	The female children were aged 2½ and 5 respectively (N 246, N 191). In the former, the only other lesion was plastic pleurisy; in the latter, both pleuræ showed a small localised empyema, the size of a walnut, near the base of the lung, in the mid-axillary line; elsewhere the pleuræ were adherent. The male child (O 14), aged 4 years, showed also purulent pericarditis.
Acute Bronchitis...	2	...	2	
Chronic Bronchitis and Emphysema...	6	3	9	Three of these, two males (N 180, O 138) and one female (O 226), showed also arrested pulmonary tuberculosis. In one of these the patient died of multiple cerebral abscesses, six being present in the right hemisphere, two in the left, and one in the cerebellum.
Bronchiolectasis, with Chronic Bronchitis and some Emphysema	...	1	1	N 192. The patient was a woman, aged 70. The lungs (especially the upper lobes) were thickly studded with minute cavities, containing muco-pus, produced by dilatation of the small bronchi. The large bronchi were natural.
Bronchiectasis	13	2	15	These are in addition to those associated with chronic pulmonary tuberculosis. For an analysis of the cases of bronchiectasis see Table VIII.
Acute Streptococcic Pleurisy, with Effusion (very slightly turbid)	1	...	1	O 214. Male, æt. 15 mos. The patient had been aspirated during life, and very faintly turbid fluid was obtained. Streptococci were found in it. *Post mortem* a few ounces of slightly turbid fluid were found, together with a good deal of lymph deposited on the surface of the lung. There was much broncho-pneumonia in the right lung.

TABLE I.—*continued.*

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
Chronic Pleurisy (probably tuberculous) with great thickening of the Membrane	1	...	1	N 119. Male, æt. 42, ex-soldier. Left pleura adherent all over. Over upper lobe this was of fairly recent date, but over the lower lobe it was of some standing, the membrane being $\frac{3}{8}$ in. thick. Over the right lower lobe the pleura was densely adherent, and nearly $\frac{1}{2}$ in. thick; over the upper and middle lobes the layers were separated by three pints of serous fluid. The thickened pleura (left) showed several patches in it, which suggested caseation, but no tubercle bacilli could be found on staining. *The lungs were absolutely free from disease, except that the right was somewhat compressed.*
Empyema	4	1	5	N 107. Male, aged 48. $2\frac{1}{2}$ pints of pus were found in right pleura. No other lesion. N 141. Male, æt 43. Left empyema operated upon during life. Most of pus evacuated, but *post mortem* a small encysted interlobar empyema found, the size of a small orange; also purulent pericarditis. O 33. Male, aged 28. Patient had acute right sero-fibrinous pleurisy three years before death. He was aspirated three times, when the fluid became purulent. Admitted into Brompton and Estlander's operation performed. Chest did not fall in satisfactorily, and patient died of exhaustion, hastened by a small serous effusion which developed on the left side. This was aspirated 33 times. *Post mortem* the lungs showed no sign of tuberculous disease, and no definite tubercles could be seen in the pleura. O 178. Male, aged 45. *Post mortem* a small empyema was found at right base containing $\frac{1}{2}$ pint of very foul pus, with a fistulous opening leading into the bronchus. Patient had had much offensive sputum, and the symptoms suggested bronchiectasis, but the bronchi were only very slightly dilated in the right lung, while in the left they were natural. Patient died of purulent meningitis. In this case there was also a small right broncho-œsophageal fistula, which seemed to have given rise to no symptoms.

TABLE I.—*continued.*

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
Empyema—*continued.*				In six other cases empyemata complicated chronic pulmonary tuberculosis (see Table II.), in one it complicated acute caseous tuberculosis (see Table IV.), and in one (O 83) morbus cordis. N 204. Female, aged 27. The empyema, which complicated some slight bronchiectasis (see Table VIII.), was situated over the upper and anterior portion of the right lung, and pointed in the first and second spaces. It was opened and the pus evacuated, but the patient died of cerebellar abscess and meningitis.
Primary Malignant Disease of the Lung	1	...	1	For a consideration of these cases, see Table VII. For secondary deposits in lung, the result of more distant primary growths, see N 109, O 145.
Malignant Disease of Mediastinal Glands, spreading directly into Lung	6	2	8	
Hydatid of the Lung	...	1	1	O 223. The patient was a female aged 54. She had had winter cough for two years, but worse during the nine months preceding death. During the last nine months she had had also pain in right side, night sweats, and gradually increasing dyspnœa. Patient came to the Out-Patient department with all the signs of a right pleural effusion (including displacement of the heart), and was admitted as such. She was aspirated, and 34 oz. of ordinary yellowish serous fluid withdrawn. Ten minutes later she died quite suddenly and without warning. *Post mortem* no cause for the sudden death could be found, but examination of the brain was not permitted. The left lung was natural. In the right a large cavity, size of an 18-pound cannon shot, was found to occupy nearly the whole lower lobe, the remains of the lung tissue forming a shell round it. Two hydatid cysts were found in the cavity, both ruptured, and one turned inside out. One cyst was larger than the other, and it is probable that the latter was a daughter cyst and originally lay within the former.

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
Hydatid of the Lung—*continued.*				The yellow serous fluid withdrawn by the aspirator certainly came from within the cyst, for the pleura all around was adherent, and *post mortem* the puncture hole could be seen leading into the cyst. Patient never had hæmoptysis
II.—DISEASES OF THE CIRCULATORY ORGANS.—Morbus Cordis.				
Chronic Valvular Disease	16	11	27	N.B.—In addition to the cases here recorded there were ten cases of chronic pulmonary tuberculosis associated with chronic valvular disease. To these reference is made in Table II. Among the 27 cases now dealt with, in 15 the mitral valve was affected ; in 4 (all males) the aortic, producing simple aortic regurgitation ; and in 8 both mitral and aortic valves were diseased. Among the cases perhaps the most striking point is the frequency with which some amount of tricuspid stenosis has been found associated with mitral stenosis. This has been observed in the following cases :— Males—O 56, O 112, O 150. Females—N 140, N 242, N 243, O 83, O 171, O 193. In two cases (males) aortic incompetence was accompanied during life by angina pectoris. In one (N 167) the coronary arteries were absolutely natural ; in the other (O 225) the orifices of both coronaries were much obstructed by atheromatous patches in the aorta, though the vessels themselves were almost natural. In one case of mitral stenosis (O 83), a woman, aged 35, the case was terminated by the development of a right-sided streptococcic purulent pleurisy. In another case (O 54, a female, aged 30) a

TABLE I.—*continued.*

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
Chronic Valvular Disease—*continued.*				small cavity, due to the breaking down of a pulmonary infarct, was found in each lower lobe. In one case of double mitral disease, with adherent pericardium, in a male, aged 15 (N 244), sudden death occurred.
Congenital Morbus Cordis	...	1	1	O 107. A girl, aged 7. The case was one of pulmonary stenosis and patent septum ventriculorum The patient died of an abscess in right temporo-sphenoidal lobe, which had ruptured into the lateral ventricle, causing somewhat sudden death.
Malignant Endocarditis	2	2	4	In three cases (O 49, O 59, and O 206), the disease followed old valvular disease. In the fourth case it was primary. In O 59 both aortic and mitral valves were affected with malignant endocarditis ; in O 49 and O 206 only the aortic. In O 49, a male, a small aneurism of one of the affected aortic cusps had also cccurred. This had ruptured at its apex. The fourth case was a very interesting one (N 112). The patient was a girl, aged 12. The endocarditis was primary, and affected chiefly the mitral valve. Patient died with cerebral symptoms, and *post mortem* a large hæmorrhage was found in the right temporo-sphenoidal region, due to the rupture of an aneurism $\frac{1}{8}$ in. in diameter. Two other infective aneurisms, the size of peas, were found in the mesentery, and one, the size of a marble, in close connection with the spleen. The mitral valve was found to be crowded with gram-staining micrococci.
Aneurism of the Aorta	3	...	3	All occurred in males (O 20, O 144, O 208). The other three cases occurring in connection with chronic pulmonary tuberculosis are referred to in Table II., dealing with the complications of this disease.
Chronic Endarteritis affecting the Pulmonary System only	...	1	1	O 15. Susan Gillett, æt. 21. The case clinically resembled one of congenital morbus cordis. For a full account, see Transactions of Clinical Society, vol. xxxiv., 1901, and vol. xxxvi., 1903. The case was shown by Dr. Kidd.

TABLE I.—*continued.*

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
Chronic Endarteritis affecting the main branches of the Pulmonary Artery, complicating Chronic Pulmonary Tuberculosis	1	.	1	O 17. In this case some ulceration at one point accompanied the endarteritis, eroding the wall of the artery over an area the size of a sixpence. The ulcerating process had also proceeded further and made a small circular hole in the adjoining bronchus. The patient died suddenly of hæmoptysis, 48 oz. The chronic endarteritis was irregular, the patches being somewhat raised.
General Chronic Endarteritis with Calcareous Degeneration (Atheroma, causing Hypertrophy of Heart	1	...	1	There was a little atheroma of the aorta, much in the coronary and cerebral vessels and in both radial and post-tibial arteries. The heart weighed 24 oz. The kidneys were natural both to the naked eye and microscopically.
III.—DISEASES OF THE DIGESTIVE ORGANS.				
Tuberculous Ulceration of the Œsophagus	1	...	1	O 100. The patient was a male, aged 54. He died of chronic pulmonary tuberculosis and pyo-pneumothorax. *Post mortem* marked irregular ulceration was found, especially in the middle third of the œsophagus. Giant cells, caseation, and tubercle bacilli were found in microscopical sections. See Transactions of the Pathological Society, 1903 (Dr. Mullings and Dr. Shrubsall)
Malignant Disease of the Œsophagus	1	...	1	O 224. Male, aged 53. The growth was a small one, involving the upper portion of the œsophagus. It had eaten through into the trachea, producing an œsophageo-tracheal fistula, which, however, had caused no symptoms. Both recurrent laryngeal nerves were involved in the growth, producing the double abductor paralysis and stridor observed during life.
Extensive Ulceration and Fibrosis of Œsophagus and Stomach	...	1	1	O 3. Female, aged 36. *Post mortem* much irregular scarring of the lower two-thirds of the œsophagus was found. Along the lesser curvature of the stomach, from cardiac to pyloric orifice, there was also much ulceration and scarring, some of it of recent date. The cause of the condition was doubtful. There was no history of taking poison, and the appearance was quite unlike an ordinary gastric ulcer. Patient had brought up blood several times during the last four years. She died of vomiting and exhaustion. Sections of the ulcers showed no signs of new growth.

TABLE I.—*continued.*

DISEASE.	NUMBER OF CASES. M.	F.	Total.	REMARKS.
Primary Malignant Disease of the Stomach	1	...	1	O 189. Male, aged 40. There were secondary growths in the heart and kidneys. The patient died unexpectedly in his sleep.
Cirrhosis of the Liver	1	...	1	O 188.
Streptothrix Disease (Actinomycosis) of Liver	1	...	1	O 149. Patient was a male, aged 42. Streptothrix disease of both lobes of the liver (but especially the left) was found *post mortem*. The pus was found crowded with *black* grains, which consisted of a gram-staining mycelium with radiating clubs. A sub-diaphragmatic abscess was also found, and purulent pericarditis. Both pleuræ were adherent over the diaphragm, and the right showed a little recent inflammation. There was also a small patch of septic broncho-pneumonia at the base of the left lung. The streptothrix grains were found only in the liver, and not in the pus elsewhere.
IV.—MISCELLANEOUS.				
Chronic Interstitial Nephritis	1	1	2	O 105. Female, aged 33. Kidneys weighed 9 oz. together, the heart 14½ oz. Patient died of thrombosis of left internal carotid at its bifurcation into anterior and middle cerebral arteries.
				N 247. Male, aged 38. Right kidney reduced to a fibrous-tissue capsule surrounding three stones; left showed the appearances of granular kidney. Patient died of uræmia. A small patch of arrested calcareous tubercle found in left upper lobe.
Malignant Disease of the Clavicle ...	1	...	1	O 145. Male. Numerous secondary growths.
Malignant Disease of the Ovary ...	...	1	1	N 109. Secondary growths in bladder, liver, kidneys, peritoneum, and lungs.
Primary Tuberculous Disease of right Fallopian Tube	...	1	1	O 34. Girl, aged 17. The tubes were removed during life. Both were tuberculous. The right was much diseased and full of pus, forming a tumour to right of middle line in right iliac region; the left showed early disease. Patient did not rally from the operation. *Post mortem* no tuberculous disease was found elsewhere.
Caries of Dorsal Vertebræ	1	...	1	O 139. The lungs were natural.

TABLE II.

ANALYSIS OF THE COMPLICATIONS OF 263 CASES OF CHRONIC PULMONARY TUBERCULOSIS.

Males, 188; Females, 75 ... ... Total, 263.

	Males.	Males. %	Females.	Females. %	Total	Total. %	Remarks.
Respiratory System.							In the female cases the larynx was not examined on nine occasions, and in the male in seven. This has been allowed for in working out the percentages.
Larynx.							
Tuberculosis of	99	54·7	31	46·9	130	52·6	
Analysis of above—							
Slight Ulceration	34	18·7	7	10·6	41	16·6	
Extensive ,, ...	65	35·9	24	36·3	89	36·0	
Ulceration laying bare—							
Left Arytenoid...	23	12·7	7	10·6	30	12·1	In ten of the male and five of the female cases, both right and left arytenoids were laid bare in same patient.
Right ,, ...	14	7·7	6	9·0	20	8·1	
Ulceration laying bare the Thyroid	1	·5	...	...	1	·4	
Ulcerative destruction of the upper portion of the Epiglottis	10	5·5	8	12·1	18	7	
Œdema of the Glottis	3	1·6	...	...	3	1·2	In one case tracheotomy was necessitated.
Trachea.							
Tuberculous Ulceration of ...	51	27·1	15	20·0	66	25·1	
Analysis of above—							
Slight Ulceration	27	14·3	8	10·6	35	13·3	
Extensive ,, ...	24	12·7	7	9·3	31	11·8	In eleven of the male cases and two of the female the cartilaginous rings were exposed.
Great Bronchi.							In fifteen of the twenty-two male cases both right and left bronchi were ulcerated. In twenty-one, tuberculous ulceration of the trachea was also found. In five of the eight female cases both bronchi were ulcerated. The trachea was ulcerated in six. In one female case the bronchus throughout the right lower lobe was markedly ulcerated, leading to obstruction of the tube by viscid secretion and caseous matter, and hence to collapse of the lobe.
Tuberculous Ulceration of ...	22	12·2	8	10 6	30	11·4	
Analysis of above—							
Right Bronchus affected ...	20	10·6	6	8·0	26	9·9	
Left Bronchus ,, ...	17	9·0	7	9·3	24	9·1	

TABLE II.—*continued.*

	Males.	Males. %	Fe-males.	Fe-males. %	Total.	Total. %	Remarks.
RESPIRATORY SYSTEM—*continued.*							
Great Bronchi—continued.							
Definite Bronchiectasis	4	2·1	2	2·6	6	2·3	
Acute Bronchitis, leading to death	8	4·2	...	...	8	3·0	
Lungs.							
Considerable Emphysema.. ...	18	9·5	...	...	18	6·8	
Commencement of Disease at –							
Right Apex	23	29·9	17	44·8	40	34·8	In only 115 cases could the point of origin of the disease in the lungs be determined. The percentages are calculated accordingly.
Left Apex	53	68·8	21	55·3	74	64·3	
Left Base	1	1·3	...	...	1	·9	
Total or nearly total excavation of							
Right Upper Lobe	20	10·6	14	18·6	34	12·9	
Left ,, ...	24	12·7	13	17·3	37	14·0	
Of whole Left Lung	3	1·6	1	1·3	4	1·5	
Terminal Acute Caseous Broncho-Pneumonia	2	1·0	...	...	2	·7	
Terminal General Miliary Tuberculosis of Lungs	10	5·3	4	5·3	14	5·3	
Extensive Broncho-Pneumonia (often Pseudolobar in type)	15	7·9	5	6 6	20	7·6	
Presence of Calcareous Masses...	18	9·5	4	5·3	22	8·3	
Analysis of above—							
In Right Lung...	8	4·2	1	1·3	9	3·4	
In Left Lung	10	5·3	4	5·3	14	5·3	
Pulmonary Aneurism	20	10·6	4	5·3	24	9·1	
Fatal Hæmoptysis	17	9·0	3	4	20	7·6	In all cases of fatal hæmoptysis an aneurism of the pulmonary artery was found, except in one case, in which death was due to the rupture of an aneurism of the descending portions of the arch of the aorta into the left bronchus. In four cases two aneurisms were found.

TABLE II. *continued.*

	MALES.	MALES. %	FEMALES.	FEMALES. %	TOTAL.	TOTAL. %	REMARKS.
RESPIRATORY SYSTEM—*continued.*							Pleurisy with adhesions was found in all of the 263 cases examined.
Pleura.							
Acute Sero-Fibrinous Pleurisy ...	12	6·3	...	...	12	4·5	In six of these definite tubercles were seen.
,, Hæmorrhagic ,, ..	1	·5	...	...	1	·3	
Purulent Pleurisy	4	2·1	2	2·6	6	2·2	In one male and in one female case Estlander's operation was performed.
Adherent Pleura containing Caseous Masses	4	2·1	2	2·6	6	2·2	
Adherent Pleura containing Calcareous Masses ...	1	·5	...	...	1	·3	
Pneumothorax	14	7·4	3	4	17	6·4	See Table VI.
,, prevented by adherent Pleura	5	2·6	...	...	5	1·9	
DIGESTIVE SYSTEM AND ABDOMINAL ORGANS.							
Peritoneum.							
Peritonitis—							
General Septic from deep Tuberculous Ulceration	2	1·0	1	1·3	3	1·1	
General Septic from Perforation of a Tuberculous Ulcer	2	1·0	1	1·3	3	1·1	The perforations had occurred—(1) in the middle of the ileum by a circular hole, $\frac{1}{8}$ in. in diameter (O 220). (2) 1 ft. 10 in. above the ileo-cœcal valve, the perforation being the size of a threepenny piece (O 64). (3) In this case, a male, aged 41 (O 167), there were two perforations, 2 in. and $6\frac{1}{2}$ in. above the ileo-cœcal valve. They were $\frac{1}{8}$ and $\frac{5}{8}$ in. in diameter respectively. A left pneumothorax from a double rupture in the pleura had also occurred.

TABLE II.—*continued.*

DIGESTIVE SYSTEM AND ABDOMINAL ORGANS—*continued.*	MALES.	MALES. %	FEMALES.	FEMALES. %	TOTAL	TOTAL. %	REMARKS.
Peritoneum—continued.							
Local Perityphlitic Abscess from Perforation of Tuberculous Ulcer	...	...	1	1·3	1	·3	Two tuberculous ulcers in the cœcum had perforated by small holes (O 216).
Tuberculous Peritonitis... ...	7	3·7	2	2·6	9	3·4	
Alimentary Canal.							
Ulceration of Tongue	4	2·1	1	1·3	5	1·9	The ulcers were apparently tuberculous in nature.
,, Pharynx	3	1·6	6	8·0	9	3·4	
Tuberculous Ulceration of Œsophagus	1	·5	...	...	1	·3	See Transactions of Pathological Society (Drs. Shrubsall and Mullings): Vol. 54, Part I., 1903.
Simple Ulceration of Œsophagus	1	·5	2	2·6	3	1·1	
Broncho-Œsophageal Fistula ...	1	·5	...	...	1	·3	
Stomach.							
Gastric Ulcer	1	...	1	1·3	2	·7	
Hourglass Contraction	...	...	2	2·6	2	...	In one case this was due to a gastric ulcer; in the other no cause could be found.
(*For Lardaceous Disease, see below.*)							
Intestines.							
Tuberculous Ulceration of: ...	114	61·3	46	61·3	160	61·3	
Analysis of above—							
Tuberculous Ulceration of Both Small and Large Intestine	77	41·4	32	42·6	109	41·7	
Small Intestine *only*	15	8·0	4	5·3	19	7·2	
Large Intestine *only*	16	8·6	8	10·6	24	9·2	
Appendix *only*	6	3·2	2	2·6	8	3·0	
Frequency with which various portions of the Intestine were affected with Tuberculous Ulceration—							
Duodenum	7	3·7	3	4·0	10	3·8	In one of these cases a lumbricus was found in the duodenum.

TABLE II.—*continued.*

DIGESTIVE SYSTEM AND ABDOMINAL ORGANS—*continued.*	MALES.	MALES. %	FEMALES.	FEMALES. %	TOTAL.	TOTAL. %	REMARKS.
Intestines – continued.							
Jejunum	30	16·1	23	30·6	53	20·3	
Ileum	89	47·8	36	48·0	125	47·8	
Cœcum	76	40·8	38	50·6	114	43·6	
Appendix	67	36·0	31	41·3	98	37·5	
Colon	54	29·0	29	38·6	83	31·8	
Rectum	22	11·8	13	17·3	35	13·4	
Fistula in Ano	3	1·6	...	...	3	1·1	
Dysenteric Ulceration of Large Intestine	2	...	...	...	2	·7	
Liver.							
Miliary Tubercle	2	1·0	...	...	2	·7	
Nutmeg	8	4·2	...	...	8	3·0	
Cirrhotic Hobnailed Liver ..	7	3·7	...	...	7	2·6	
Fatty	48	25·5	19	25·3	67	25·4	
Gall Stones in Gall Bladder ...	2	1·0	1	1·3	3	1·1	
Spleen.							
Caseous Tubercle	1	·5	...	...	1	·3	
Infarcts	4	2·1	2	2·6	6	2·3	
Kidneys.							
Fatty	3	1·6	1	1·3	4	1·5	
Parenchymatous Nephritis ...	...	...	1	1·3	1	·3	
Interstitial Nephritis	16	8·5	12	16·0	28	10·6	
Miliary Tubercle	21	11·1	7	9·3	28	10·6	
Caseous ,, ...	5	2·6	1	1·3	6	2·3	
Infarcts	3	1·6	...	...	3	1·1	
Renal Calculi	1	·5	...	...	1	·3	In this case (a man, aged 21) 171 stones were found packed in the pelvis and calices of one kidney. There had been no history of renal colic (O 99).

TABLE II.—*continued.*

DIGESTIVE SYSTEM AND ABDOMINAL ORGANS—*continued.*	MALES.	MALES. %	FEMALES.	FEMALES. %	TOTAL.	TOTAL. %	REMARKS.
Suprarenals.							
Tuberculous disease of	4	2·1	2	2·6	6	2·3	In two of the male cases and one of the female (O 109, O 222, O 153), both suprarenals were affected to some extent. In the others (O 75, O 81, O 135) only one was affected. In no case were there any symptoms of Addison's disease.
Bladder.							
Tuberculous Cystitis	2	1·0	...	...	2	·7	In both cases (N 122 and N237) there was tuberculous disease also in the prostate and epididymis, and miliary tubercles in the kidney.
Generative Organs.							
Male.							
Affected by Tuberculous Disease...	9	4·7	...	...	...	...	In two cases one testicle only was present. In one case (N 216) the right epididymis and cord, and in the second (O 232) the right vesicula seminalis were the only portions of the genito-urinary tract affected.
Analysis of above—							
Tuberculous Disease of Body of Testicle	2	1·0	...	..	...	...	
Epididymis	6	3·2	...	...	...	...	
Vesiculæ Seminales	5	2·6	...	...	...	...	
Prostate	6	3·2	...	...	...	...	
Female.							
Affected by Tuberculous Disease...	...	...	8	10·7	...	...	
Analysis of above—							
Tuberculous Ovaries	...	...	2	2·7	...	...	
,, Tubes	...	...	8	10·7	...	...	
,, Endometritis ...	...	...	5	6·7	...	...	N 110, N 150, N 176, O 95. O 216. In these five cases of tuberculous endometritis the mucous membrane lining the interior of the uterus was ragged and irregular, and partly caseating. In three cases tubercle bacilli were found in large numbers in a scraping, and in all five the tubes were affected with tuberculous disease. The uterus itself was only slightly, if at all, enlarged. In no case were there symptoms during life.

TABLE II.—*continued.*

DIGESTIVE SYSTEM AND ABDOMINAL ORGANS—*continued.*	MALES.	MALES. %	FEMALES.	FEMALES. %	TOTAL.	TOTAL. %	REMARKS.
Lardaceous Disease.							
Present in	18	9·5	10	13·3	28	10·6	In three cases the liver and in four the spleen were the only organs affected. In thirteen cases three or more organs were affected.
Analysis of above—							
Stomach affected...	4	2·1	3	4·0	7	2·6	
Intestines ,, ...	7	3·7	6	8·0	13	4·9	
Liver ,, ...	11	5·8	6	8·0	17	6·4	The weights varied between 52 and 118 oz. in the female, and 62 and 121½ oz. in the male.
Spleen ,, ...	14	7·4	8	10·6	22	8·3	The weights varied between 3½ oz. and 16 oz. in the female, and 5 and 15 in the male.
Kidneys ,, ...	11	5·8	7	9·3	18	6·8	The highest weights for the kidneys were 22 oz. in a female and 20½ oz. in a male. The lowest weight was 10 oz. (also in a male).
							The testis was affected in one case, and the thyroid in two.
CIRCULATORY SYSTEM.							
Death from sudden Syncope ...	7	3·7	...	...	7	2·6	In three cases no special cause for the sudden death could be found.
Pericardium, Adherent	4	2·1	1	1·3	5	1·9	
Simple Pericarditis...	3	1·6	...	...	3	1·1	
Tuberculous Pericarditis	4	2·1	...	...	4	1·5	N 185. Male, aged 44. Layers of pericardium adherent; on separation many tubercles found. Right acute sero-fibrinous pleurisy also present.
							N 224 Male, aged 24. Lymph covered base of heart, and one or two patches of caseation found in visceral layer of pericardium.
							O 134. Male, aged 26. Pericardium contained 1½ pints of bloodstained serous fluid; both layers covered with thick whitish lymph, which near apex was ½ in. thick; on scraping it tubercle bacilli were found. Right sero-fibrinous pleurisy (1½ pints of fluid) also present.

TABLE II.—*continued.*

	Males.	Males. %	Females.	Females. %	Total.	Total. %	Remarks.
CIRCULATORY SYSTEM—*continued.*							
Tuberculous Pericarditis—*cont.*							O 129. Male, aged 45. A case of chronic pulmonary tuberculosis, ending in acute serous-membrane tuberculosis (tuberculous pericarditis, peritonitis, right sero-fibrinous pleurisy, and meningitis). The pericardium contained considerable excess of slightly turbid fluid, and both layers were covered with a layer of whitish lymph, $\frac{1}{10}$ in thick. Tubercle bacilli found in a scraping of the lymph.
Endocarditis—							
Recent small vegetations ...	1	·6	1	1·3	2	·7	
Warty growths	3	1·6	1	1·3	4	1·5	All were on the mitral valve.
Chronic Endocarditis, causing Valvular Disease	8	4·2	2	2·6	10	3·8	In six of the ten cases the lesion had caused mitral stenosis, with or without regurgitation (N 131, N 256, O 13, O 232); in three pure mitral regurgitation (N 186, O 39); and in one aortic regurgitation (N 103).
Atheroma of Aorta—							
Considerable	14	7·4	...	...	14	5·3	
Leading to Aortic Aneurism ...	3	1·6	...	...	3	1·1	In one case (O 201) the patient died of fatal hæmoptysis, the aneurism, which was in the descending portion of the arch of the aorta, rupturing into the left bronchus. The other cases were N 228 and O 211.
General Arterio-Sclerosis	1	·6	...	...	1	·3	The patient (a male, aged 59) died with dry gangrene of both feet (O 66).
Venous Thrombosis	2	1·0	5	6·6	7	2·6	In six cases the iliac and femoral veins were affected, twice on the right side, three times on the left, and once on both sides. In the seventh case (a male) the thrombosis affected the right innominate, subclavian, axillary, bronchial, and internal jugular veins.

TABLE II.—*continued.*

	Males.	Males. %	Females	Females. %	Total.	Total. %	Remarks.
CIRCULATORY SYSTEM—*continued.*							
General Serous Membrane Tuberculosis	2	1·0	...	...	2	·8	In one case (O 129) pleura, peritoneum, and pericardium, andalso the meninges of the brain(tuberculous meningitis) were affected; and in the other the left pleura and the peritoneum.
GLANDULAR SYSTEM.							
Tracheal, Caseous	...	...	1	1·3	1	1·3	
Bronchial Glands—							
Enlarged	97	51·6	30	40·0	127	48·2	
Caseous	14	7·4	10	13·3	24	9·1	
Calcareous...	23	12·2	16	21·3	39	14·8	
Anterior Mediastinal—							
Enlarged	30	15·9	14	18·6	44	16·7	
Caseous	2	1·0	4	5·3	6	2·2	
Calcareous...	0	...	0	..	0	...	
Post Mediastinal—							
Enlarged	42	22·3	13	17·3	55	20·9	
Caseous	4	2·1	5	6·6	9	3·4	
Calcareous...	1	·5	...	...	1	·3	
Supra Mediastinal—							
Enlarged	63	33·5	17	22·6	80	30·4	
Caseous	3	1·6	6	8·0	9	3·4	
Calcareous...	6	3·2	1	1·3	7	2·6	
Submaxillary—							
Enlarged	12	6·3	6	8·0	18	6·8	
Caseous	2	1·0	1	1·3	3	1·1	
Calcareous...	3	1·6	...		3	1·1	

TABLE II.—*continued.*

	Males.	Males. %	Females.	Females. %	Total.	Total. %	Remarks.
GLANDULAR SYSTEM—*continued.*							
Cervical—							
Enlarged	47	25·0	12	16·0	59	22·4	
Caseous	27	14·3	8	10·6	35	13·3	
Calcareous	2	1·0	...	..	2	·7	
Mesenteric—							
Enlarged	50	26·6	24	32·0	74	28·1	
Caseous	21	11·1	14	18·6	35	13·3	
Calcareous	11	5·8	6	8·0	17	6·4	
Lambar							
Enlarged	...	...	1	1·3	1	·3	
Caseous	2	1·0	2	2·6	4	1·5	
Cœliac—							
Enlarged	...	..	2	2·6	2	·7	
Caseous	...	...	3	4·0	3	1·1	
Inguinal—							
Enlarged	...	...	1	1·3	1	·3	
Caseous	..	...	1	1·3	1	·3	
Iliac—							
Enlarged	...	...	1	1·3	1	·3	
Caseous	...	...	1	1·3	1	·3	
Thyroid.							
Caseous	1	·5	...		1	·3	
Calcareous	...	...	1	1·3	1	·3	
Meninges and Brain.							
Tuberculous Meningitis	5	2·6	2	2·6	7	2·6	
OSSEOUS SYSTEM—							
Old Tuberculous Disease of Hip	1	·5	...	...	1	·3	

TABLE II.—*continued.*

	Males.	Males. %	Females.	Females. %	Total.	Total. %	Remarks.
Osseous System—*continued.*							
Old Tuberculous Disease of Wrist and Foot, for which amputation had been performed	2	1·0	...	...	2	·8	
Central Necrosis of Fourth Left Rib. Costal Abscess	1	·5	...	...	1	·3	
Caries of Dorsal Spine ...	1	·5	1	1·3	2	·8	
,, Lumbar ,, ...	1	·5	...	...	1	·3	

In one of the above cases (a male) the patient died of *diabetes;* in two others (also males) death resulted from malignant disease of the mediastinum, lympho-sarcomatous in nature. A fourth patient suffered also from Raynaud's disease.

TABLE III.

THE AGE AT DEATH OF 243 OF THE CASES OF CHRONIC PULMONARY TUBERCULOSIS REFERRED TO IN THE PRECEDING TABLE.

Age.	Male.	Female.	Male and Female Combined. Total.	Age.	Male.	Female.	Male and Female Combined Total.
6–10	1	...	1	46–50	8	3	11
11–15	2	3	5	51–55	4	...	4
16–20	28	13	41	56–60	2	...	2
21–25	38	9	47	61–65	1	...	1
26–30	24	14	38	66–70	...	..	...
31–35	20	14	34				
36 40	30	9	39				
41–45	16	4	20	Total ...	174	69	243

TABLE IV.

ANALYSIS OF 10 CASES OF ACUTE CASEOUS TUBERCULOSIS OF THE LUNGS (BRONCHO-PNEUMONIC TYPE).

The duration of the illness varied from 11½ weeks to 7 months. Cavities had formed in every case. The following were the only complications of note:—

Number.	Sex.	Age.	Tubercular Ulceration of Intestine.	Tubercular Disease of Larynx.	Other Complications.
N 114	M	27	Slight	Early	
N 124	F	19	Slight	Early	Left partial pneumothorax.
N 136	F	34	(Not examined)	No	
N 181	M	19	Very numerous ulcers	No	Right pneumothorax prevented by protective action of pleura.
N 182	F	16	Slight	Early	Left pneumothorax (nearly total).
N 219	F	12	Slight	No	Both right and left femoral veins thrombosed.
N 253	F	12	Slight	Early	
O 8	F	35	Slight	Early	
O 67	F	17½	No	No	
O 218	F	21	Fair number of ulcers	Early	
O 98	M	18	No	Extensive	
O 179	F	15	Slight	No	A left tuberculous diaphragmatic empyema containing xii. oz. of thick pus. Many tubercle bacilli in pus.

Remarks.

The above figures show (1) that in these cases tuberculous ulceration of the intestine and also of the larynx was rather more frequent than in the cases of ordinary chronic pulmonary tuberculosis, though owing to the early death of the patient the lesions were rarely advanced. (2) In these cases pneumothorax also occurred with greater relative frequency than in the more chronic cases—in 2 out of 12 as opposed to 17 out of 263, or 16·6 per cent. as opposed to 6·4 per cent., though the actual numbers are too small to lay great stress upon. (3) The *preponderance of the female sex* is also striking (8 out of 12), especially if we remember that of the 263 cases of chronic pulmonary tuberculosis analysed above only 75, or 28·5 per cent., were females. (4) The *comparatively early age of these acute cases* is also noteworthy, when we compare their age incidence with that of the more chronic cases quoted above (see Table III). Of the acute cases, 9 out of 12 (75 per cent.) were below the age of 20, while of the chronic ones who died in the hospital during the same period only 47, or *19·3 per cent.*, were below this age (the latter figure corresponding well with the 18·2 per cent., which represents the proportion of those who die of phthisis *below the age of 20* for the whole of England and Wales, as deduced from the Registrar-General's returns).

TABLE V.

ANALYSIS OF 23 CASES OF PULMONARY ANEURISM

No.	Sex.	Age.		Disease Commenced.	Position of Aneurism.	Size of Aneurism.	Condition of Surrounding Lung.	Duration of Disease.	Remarks.
N 142	M	37	Fatal Hæmoptysis	Left apex ...	Left upper lobe (in a cavity 2 in. from apex)	Size of largish marble	Fibrosed, and cavity of old standing	14 years (had hæmoptysis at this date)	The case seemed one of arrested tuberculosis, and the old disease was confined to the left upper lobe.
N 146	F	47	,, ,,	Left apex ...	Left upper lobe (in a cavity 2 in × 1½ in.)	Size of pea	Cavity of old standing. Lung contracted and fibrosed	16 months (commenced with hæmoptysis)	
N 220	F	7	,, ,,	... ...	.. ..	Size of a No. 5 shot	Both lungs considerably diseased and undergoing fibrosis ; but little active disease	3 years	The aneurism found had *not* ruptured, and was not the source of the fatal hæmoptysis.
N 223	M	21	,, ,,	.. ..	Two aneurisms—(1) Left lower lobe (2) Right middle lobe	Both aneurisms size of small marbles	The aneurism in left lower lobe was on the anterior wall of an old thick-walled cavity ; that in right middle lobe was in the centre of lung, filled with *recent* miliary racemose tubercle	2 years	First attack of hæmoptysis six months before death. Two brothers died of hæmoptysis.
N 229	M	32	,, ,,	... ...	Left upper lobe ..	Size of small marble	The aneurism was in an *old* cavity, size of a Tangerene orange	8 months (probably more)	
O 45	M	25	,, ,,	Left apex ...	Left upper lobe...	Size of small pea	The aneurism was on the lower part of the posterior wall of an *oldish* cavity, 3½ in. × 4 in.	... ...	The remainder of lung showed more recent disease.
O 97	F	28	,, ,,	Left apex ...	Left lower lobe (upper portion of)	Size of largish marble	The aneurism was in a small cavity of some standing. The right lung showed more recent disease	3 years	Slight hæmoptysis two years ago. The aneurism was only discovered on "mincing" the lung.
O 120	M	41	,, ,,	Left apex ...	Left upper lobe (near lower border)	Large aneurism, 1⅜ in. long × 1⅛ in. broad	It was situated in a *recent* cavity	13 months ...	Both lungs showed extensive and recent tuberculous disease.
O 181	M	31	,, ,,	Left apex ...	Right upper lobe	Size of pea	Aneurism situated in a *fairly recent* cavity, the size of an orange	2 years	Patient had never had hæmoptysis before he suddenly brought up a pint and a half of blood and died.

TABLE V.—*continued.*

No.	Sex.	Age.		Disease Commenced.	Position of Aneurism.	Size of Aneurism.	Condition of Surrounding Lung.	Duration of Disease.	Remarks.
O 182	M	40	Fatal Hæmoptysis	Left apex ...	... ...	Size of No. 5 shot	... .	9 months ...	The aneurism found had *not* ruptured, but the source of the fatal hæmoptysis could not be found, though the lung was cut up very finely.
O 195	M	19	,, ,,	Right apex ...	Right lower lobe (near centre of axillary border)	Size of small walnut	Aneurism situated in an *oldish* cavity, size of walnut	2 years	Patient had never had hæmoptysis until five days before death.
O 196	M	...	,, ,,	... ...	Left lower lobe (just above diaphragm)	Size of pea	Aneurism found in a cavity the size of a filbert, of *fairly recent* date.	... ...	
O 203	M	20	,, ,,	Right apex ...	Left lower lobe ...	Size of pea	The aneurism was found in a small *recent* cavity ($\frac{3}{4}$ in. × $\frac{1}{2}$ in.) in upper and anterior surface of left lower lobe	... ...	The whole of the disease in the right lung was recent, that at the right apex of some standing.
O 204	M	18	,, ,,	Left apex ...	Left lung	Two aneurisms found— (1) Size of pea (2) Size of No. 5 shot	Left lung somewhat fibrosed, but riddled with smallish cavities filled with muco-pus	9 months ...	Frequent recurrent hæmoptysis.
O 217	M	43	,, ,,	... ...	Right lower lobe	Small fusiform aneurism	Aneurism in a cavity, size of a walnut, of *fairly recent* date	2 years	
O 222	M	24	,, ,,	Right apex ..	Left upper lobe ...	Two small aneurisms (one had ruptured)	Aneurisms found in an *oldish* cavity near base of left upper lobe	2 years	
O 227	M	43	,, ,,	Left apex ...	Left upper lobe ...	Two aneurisms, size of heads of bonnet pins (one had ruptured)	Both aneurisms found in a cavity, size of a walnut, of some standing	... ...	
O 114	M	21	,, ,,	Left apex ...	Right upper lobe	Size of large pea	Aneurism found filling a small recent cavity in lower part of right upper lobe. The lung around showed recent active disease	1 year 8 months	

TABLE V.—*continued.*

No.	Sex.	Age.		Disease Commenced.	Position of Aneurism.	Size of Aneurism.	Condition of Surrounding Lung.	Duration of Disease.	Remarks.
O 25	M	25	Fatal Hæmoptysis	Right apex ..	Right lower lobe (quite close to diaphragm)	Largish marble ...	The aneurisms quite filled a *recent* cavity	15 months ...	
N 115	M	22	Hæmoptysis — 26 ozs. five weeks before death	... ...	Left lower lobe (near the base)	Size of an ordinary marble	The left lower lobe was solidified with tubercular broncho-pneumonia beginning to soften. In this recent disease the aneurism was found	15 months ...	
N 224	M	24	Hæmoptysis — 42 ozs. ten days before death	... ...	Right middle lobe	Size of small nut	Aneurism found filling a small cavity at anterior and lower part of lobe. The lobe showed a good deal of fibrosis	1½ year	Patient died with tuberculous pericarditis and tuberculous ulceration of the intestines.
O 124	M	41	Hæmoptysis — two months before death	.. ..	Right lower lobe (near apex posteriorly)	Size of small marble	Aneurism found completely filling a small comparatively recent cavity	1 year	
N 113	F	45	No Hæmoptysis noted	Left apex ...	Left upper lobe .	Aneurismal dilatation in an artery crossing a cavity	Left upper lobe totally excavated, and in an artery crossing it the aneurismai dilatation was found	2 years	

REMARKS.

(1) In the above Table the greater frequency of aneurism and fatal hæmoptysis in the male, as compared with the female sex, is noticeable. If reduced to percentages it will be found that of the total cases examined 9 per cent of the males and 4 per cent of the females died of hæmoptysis, while in 10·6 of the male cases were aneurisms found, as against 5·3 per cent. of the females.

(2) In regard to size the aneurisms, as will be seen, varied from that of a *No. 5 shot* to that of a *large walnut*, but the most common size was that of a *pea*, though aneurisms the size of small and largish marbles were not uncommon.

(3) The aneurisms occurred in both lungs—on 14 occasions in the left and on 8 in the right. In 10 cases they were found in the upper lobe ; in 2 in the middle lobe ; in 9 in the lower lobe. In 3 cases they were in the very lowest portion of the lobe, close to the diaphragm.

(4) In the great majority of cases (15 out of 19) the aneurisms occurred in the lung which showed the most extensive disease, proving the wisdom of the common practice of turning patients suffering from hæmoptysis on to this side.

(5) Thirteen of the aneurisms occurred in cavities of some standing, with obvious fibrosis around, but in 10 others the process was a much more recent one the lung around being the seat of active tuberculous disease.

TABLE VI.

ANALYSIS OF 19 CASES OF TUBERCULOUS PNEUMOTHORAX.

No.	Sex.	Age.	Side of Perforation	Position of Perforation	Nature and Size of Aperture.	Extent of Pneumothorax.	Nature and Amount of Fluid.	Duration of Pneumothorax.	Character of Lung Disease.	Remarks.
N 108	M	27	Right ...	In anterior axillary line in lower portion of middle lobe	Small circular hole, $\frac{1}{8}$ in. in diameter	Partial; extending over right middle and lower lobes in front, and to mid-axillary line behind	A very little purulent fluid	Doubtful ...	Chronic pulmonary tuberculosis, rapidly progressing	The pneumothorax caused no symptoms, and was only found at the autopsy. Patient died of gradual cardiac and respiratory failure.
N 145	M	...	Left ...	In lower part of upper lobe anteriorly, at level of 3rd rib, 1 in. from right border of sternum	Small circular hole, admitting a probe	Partial; extending over left lower lobe. Upper lobe nearly all adherent	A few ozs. of pus	,, ...	Disease in left lung of old standing, with a little recent extension. In right lung, rapid recent extension	The rupture opened into the very anterior apex of the pneumothorax. The pleura over the remainder of upper lobe was densely adherent and about $\frac{1}{4}$ in. thick.
N 193	M	26	,, ...	In upper part of lower lobe in anterior axillary line	"Pin's-head opening," but pleura around necrosed over area size of threepenny piece	Partial. Pleura adherent over left upper lobe and apex of lower lobe behind. Elsewhere pneumothorax	3–4 ozs. of serous fluid	,, ...	Chronic pulmonary tuberculosis now spreading rapidly, but had probably lasted for 1 year and 8 months	Patient admitted with signs of pneumothorax, the duration of which was doubtful.
O 27	M	20	,, ...	In lower lobe, about its centre posteriorly	Circular, size of pin's head	Practically total. Pleura only adherent slightly at apex of left lung	None	30 hours ...	Chronic pulmonary tuberculosis, almost stationary, no active disease except one superficial spot of softening	Patient had some oldish disease, with small cavities of some standing at apex of upper and lower lobes of both lungs. The rupture had resulted from the softening of a small patch of caseation near surface of lung, but with this exception the disease was almost stationary.

TABLE VI.—*continued*

No.	Sex.	Age.	Side of Perforation.	Position of Perforation	Nature and Size of Aperture.	Extent of Pneumothorax.	Nature and Amount of Fluid.	Duration of Pneumothorax.	Character of Lung Disease.	Remarks.
O 70	M	16	Left ...	Two perforations— (1) axillary aspect of lower lobe. (2) Lower and antero-lateral aspect of upper lobe	Two perforations (see further)	Practically total	Several pints of pus	2 months ...	Chronic pulmonary tuberculosis, rapidly progressing. Duration 7½ months	The left lung was collapsed, and over two areas the pleura was ulcerated through. These areas were in the upper and lower lobes, and were the size of a half-crown and a threepenny piece respectively. A thick deposit of lymph shut off the communication between the lung and pleura for the most part, but at one spot in each a hole the size of a large pin's head was found. Death accelerated by lardaceous disease.
O 79	M	36	Right ...	Closed	Closed	Replaced by an	empyema ...	8 months ..	Chronic pulmonary tuberculosis, almost stationary. Duration of cough 21 months. Terminal miliary tuberculosis	Eight months before death patient showed movable dulness when attending as an out-patient at the Hospital. When admitted three months before death he had no sign of pneumothorax, but showed a *contracted right side* with dulness at the base behind. He did well for a time, but then died of acute miliary tuberculosis of the lungs. At the autopsy an empyema was found on the right side, but no sign of the old rupture, which had apparently quite closed.
O 90	M	45 (?)	,, ...	Could not be found	... ...	Total, except for adhesions at right apex	7 pints of pus removed by Estlander's operation	7 months ...	Chronic pulmonary tuberculosis, gradually extending. Duration 10 mos. (case terminated by operation)	Right chest became full of pus, and *Estlander's operation* was performed. 45 ins. of ribs removed. Patient never rallied, and died ten days later.
O 94	M	36	Left ...	In upper lobe opposite 3rd space, close to sternum	Circular, size of pin's head	Practically total	Several pints of pus	At least 5 weeks	Chronic pulmonary tuberculosis, gradually extending. Duration 15 months	Patient was found to have pneumothorax on admission five weeks before death. There had been no definite signs of its onset, and its duration could not therefore be stated. Patient had also tuberculous disease of the larynx, and early lardaceous disease of the spleen. Death was rather sudden.

TABLE VI.—*continued.*

No.	Sex.	Age.	Side of Perforation.	Position of Perforation	Nature and Size of Aperture.	Extent of Pneumothorax.	Nature and Amount of Fluid.	Duration of Pneumothorax.	Character of Lung Disease.	Remarks.
O 100	M	54	Left ...	In lower lobe near its apex posteriorly	Circular—admitted probe	Total; except for adhesions at left apex, back and front	2 pints of sero-purulent fluid	At least 2½ months	Chronic pulmonary tuberculosis, rapidly extending. Duration 5 months	The onset of the pneumothorax was insidious. It was found on admission. Patient died practically of inanition owing to dysphagia from tuberculous ulceration of the œsophagus (see Transactions of the Pathological Society, p. 84, 1903).
O 102	M	18	Right ..	Upper lobe, in anterior surface opposite 3rd space	Size of pin's head	Partial. Pleura adherent over right posterior and axillary surfaces. Pneumothorax limited to anterior surface below 2nd rib, to the diaphragmatic surface of lung, and to the lower 2 in. of the axillary region	A pint or more of pus	Some weeks	Chronic pulmonary tuberculosis, gradually extending. Duration 13 months	No definite history of onset. Patient died of his phthisis, which had progressed much in the other lung.
O 110	M	47	Left ...	Upper lobe, at level of 3rd rib	Linear, ½ in. long × 1/16 in. broad	Partial. Limited by adhesions to anterior and axillary portions of chest	Serous fluid	Possibly 2 weeks	Chronic pulmonary tuberculosis, gradually extending. Duration 3 years	Breathing very short for two weeks, but no definite history of onset. Patient died rather of his phthisis, together with tuberculous ulceration of his larynx and intestines.
O 162	M	39	,, ...	Probably in upper lobe	... ...	Total; except for adhesions at left apex	3–4 pints of sero-purulent fluid	5 months ..	Chronic pulmonary tuberculosis, gradually extending. Duration 1 year	Rupture proved by pumping air into trachea before removal of lungs from chest, but could not be located afterwards as apex had to be cut away owing to adhesions, thus exposing the lung. The pneumothorax developed in the hospital five months before death. This resulted from exhaustion due to the pulmonary condition, complicated by extensive tubercular laryngitis and tubercular ulceration of the intestines.
O 167	M	41	,, ...	Two perforations in upper lobe posteriorly	(1) Circular, 1/16 in. in diameter. (2) Linear, ⅛ in. long.	Partial. Pleura adherent over left upper lobe in front	4 ozs. sero-purulent fluid	2 days ...	Chronic pulmonary tuberculosis, spreading rapidly. Duration 7 months	In addition to the two perforations of the pleura, there were two perforations of tuberculous ulcers of the intestine, with fæces in the peritoneum.

TABLE VI.—*continued.*

No.	Sex.	Age.	Side of Perforation.	Position of Perforation	Nature and Size of Aperture.	Extent of Pneumothorax.	Nature and Amount of Fluid.	Duration of Pneumothorax.	Character of Lung Disease.	Remarks.
O 184	M	26	Right ...	Apex of lower lobe posteriorly	Circular, size of pin's head, closed by shaggy lymph	Practically total	9 pints of pus found *post-mortem* and 2½ removed by aspiration shortly before death	At least 2 months	Chronic pulmonary tuberculosis, gradually extending. Duration 1¼ years	This case showed extreme displacement downwards of the diaphragm, which formed a convex, sausage-shaped tumour in the abdomen, displacing the liver to the left. Death sudden, but patient greatly exhausted.
O 52	F	27	,, ..	Apex of lower lobe posteriorly	Circular, size of small pea	Practically total	3½ pints of sero-purulent fluid	Four months	Chronic pulmonary tuberculosis, lately progressing rapidly, though disease had probably existed for some considerable time	Pleura partially adherent around the perforation, suggesting a partial but unsuccessful attempt to effect a cure. Pneumothorax developed in the hospital. On three occasions small quantities of fluid removed by aspiration. Patient gradually sank, suffering much from dyspnœa, though the heart was not displaced (apex beat in nipple line).
N 124	F	19	Left ..	Three perforations, all in upper lobe near lower border ; (1) in anterior axillary line, (2) and (3) in mid-axillary line. These two were situated in a necrosed patch of pleura, size of a three-penny piece	All about ⅛ in. in diameter	Partial ; extending over left lower axillary region and lower part of lung in front	None	Two days ..	Acute caseous tuberculosis (broncho-pneumonic type), rapid softening	Sudden pain in left side two days before death, with development of a partial pneumothorax.
O [illegible]	F	23	Left ...	2 in. below apex of upper lobe anteriorly	Minute hole in centre of necrosed patch of pleura, size of a four-penny piece	Total; except for adhesions at left apex	None	Few hours	Chronic pulmonary tuberculosis. Recent rapid extension, but total duration 14 mos.	Patient died of tuberculous meningitis, and the pneumothorax, which probably occurred very shortly before death, was not suspected during life.

TABLE VI.—*continued.*

No.	Sex.	Age.	Side of Perforation.	Position of Perforation	Nature and Size of Aperture.	Extent of Pneumothorax.	Nature and Amount of Fluid.	Duration of Pneumothorax.	Character of Lung Disease.	Remarks.
O 130	F	19	Right ...	Anterior surface of lower lobe, 1 in. from anterior axillary line	Size of a threepenny piece	Partial; extending over right middle and lower lobes	None	Six days ..	Chronic pulmonary tuberculosis, with rapidly extending caseation and softening. Duration 8 months	Over the right upper lobe, in two places, pleura eaten away over areas size of a threepenny piece, but owing to surrounding adhesions no pneumothorax had resulted. The pneumothorax caused no symptoms, and was found on examination of chest.
N 123	F	16	Left ...	Lower lobe 2 in. below apex posteriorly	Circular, size of a large pin's head, and situated in centre of a necrosed area of pleura, size of threepenny piece	Nearly total (adhesions at left apex)	3 ozs. clear serous fluid	Not more than six days, probably less	Acute caseous tuberculosis (broncho-pneumonic type), rapid softening. Duration four months	The pneumothorax gave no sign during life, and was discovered at the *post-mortem* examination. Patient had been going downhill since admission.

REMARKS.

(1) Of the 17 cases of pneumothorax occurring in the course of chronic pulmonary tuberculosis, 14 were in males and 3 in females, giving a percentage incidence of 7·4 and 4·0 respectively. Both the cases occurring in the course of acute caseous tuberculosis were in females. The ages of the patients varied from 16 to 54.

(2) Of the 19 cases, in 12 the pneumothorax was on the left side, in 7 on the right.

(3) The point of rupture was on 9 occasions in the upper lobe, on 1 in the middle, and on 8 in the lower lobe; in 1 it was closed, and in another it could not be located.

(4) In 2 cases there were *two* perforations, and in 1 case *three*. In the remaining cases the point of rupture was single.

(5) The size of the aperture in the pleura was, in the majority of the cases, small and circular. Thus, in 12 it was of the size of a pin's head, or only large enough to admit a small probe. In 2 it was larger, the size of a pea or of a threepenny piece. In 2 the aperture was *linear*, and was ½ and ⅓ in. long respectively. Lastly, in 1 case the perforation, the size of a large pin's head, was found in the centre of a large ulcerated area in the pleura, the connection with the pleural cavity being closed by thick lymph except at this one spot.

(6) In 10 cases the pneumothorax was total; in 8 it was partial. Of the latter, in 6 it was limited by adhesions to the lower and middle lobes, while *in 2 cases the pleura being adherent posteriorly, the pneumothorax occupied only the anterior, and to some extent the axillary region of the chest.*

(7) In 11 of the 19 cases the pulmonary disease was extending rapidly when the pneumothorax occurred; in 6 cases extending gradually. *In 2 the disease was practically stationary.* In 1 of these (O 27) a small superficial spot of softening had occurred, leading to pneumothorax and death. In the other (O 79) probably the same had occurred, but the pneumothorax disappeared, the air being replaced by pus, and the patient eventually dying of miliary tuberculosis.

TABLE VII.

ANALYSIS OF 7 CASES OF MALIGNANT DISEASE OF THE LUNG.

I. Primary Carcinoma of Lung.

No.	Sex.	Age.	Original Seat of Disease.	Spreading into	Portion of Lung Affected.	Secondary Growths.	Microscopical Appearances.	Duration of Disease.	Remarks.
N 187	M Cement worker and bargee	48	Right upper lobe	Right lower and middle lobes; right pleura; both bronchi (slightly); bronchial anterior and post mediastinal glands, and glands above both clavicles; pericardium	Right upper, middle, and lower lobes, left upper lobe	Peritoneum; both kidneys; lumbar glands	A typical carcinoma (lungs and kidneys examined)	1 year 8 months	Patient traces his illness to a blow on back by a crane. Cough began shortly after. The other symptoms complained of were expectoration, dyspnœa, and pain in right side. The appearance of the growth in this case was different to that of an ordinary lympho-sarcoma. Instead of the large more or less homogeneous white mass seen in most cases, the growth here consisted of separate little whitish masses, varying in size from a pin's head to that of a pea, the intervening lung being in places rendered solid by œdema. Similar small masses were found in right pleura. In addition to the growth the lungs showed a good deal of broncho-pneumonia. The body was not wasted. The chief mass of new growth was in the right upper lobe, and the disease probably originated there.

II. Lympho-Sarcomatous in Nature, spreading from the Mediastinal Glands.

N 127	M Carman	48	Bronchial glands	Pericardium; heart (very slightly); left lung	Left upper lobe (almost converted into one large mass of new growth)	None...	Lympho-sarcoma	6 months ...	Right lung was natural. Left lower lobe showed patches of septic broncho-pneumonia. Right lung weighed 27 ozs., left 69½ ozs. Patient began to be short of breath 6 months before death. Lost 2 stones during his illness, but the body was not obviously wasted at death. He was hoarse during last 2 weeks of life, and the left recurrent laryngeal nerve was found *post mortem* quite involved in the mass of new growth at the apex of the lung.

TABLE VII.—*continued.*

No.	Sex.	Age	Original Seat of Disease.	Spreading into	Portion of Lung Affected.	Secondary Growths.	Microscopical Appearances.	Duration of Disease.	Remarks.
N 195	M Labourer	47	Bronchial glands	Right lung; right bronchus; pericardium (slight); trachea (slight); left bronchus (slight)	Chiefly right upper lobe, but to a less extent, left lower lobe, forming a circular mass 3½ in. in diameter. Pleura all over densely adherent, and over upper lobe ½ in. thick	(1) Anterior and post mediastinal glands; (2) right kidney (left kidney absent)	Lympho-sarcoma	14 months ...	Some cough and shortness of breath, gradually getting worse since 14 months ago. The portion of right lung not affected by growth was in a condition of disintegrating septic broncho-pneumonia. Pleura densely adherent over whole lung. Left lung natural. Body somewhat wasted.
O 77	M Carpenter	45	Bronchial and post mediastinal glands	Right lung ...	Right lung, upper and middle lobes (the mass occupying ⅔ of their area), lower lobe compressed by a large serous effusion	(1) Head of pancreas (size of cricket ball); (2) three smaller ones in right lobe of liver; and (3) one in right psoas muscle, compressing lumbar plexus	Lympho-sarcoma	4½ months ...	Patient died suddenly. The body was well nourished. Chief complaint had been shortness of breath.
O 106	M Car driver	24	Bronchial glands	Left lung; left bronchus; pericardium; heart (slight); post and supra mediastinal glands	Right upper and lower lobes (chiefly in latter), forming a mass the size of a cricket ball. Pleura densely adherent all over back and front, and infiltrated with new growth	(1) Liver (144 ozs.), diffuse infiltration of; (2) pancreas, few small scattered masses of new growth; (3) cœliac glands	Lympho-sarcoma	14 months ...	Patient's chief symptoms had been cough and expectoration, with dragging pains over left side of chest and severe attacks of palpitations. Towards end he complained of slight dysphagia, and became jaundiced. The body was wasted.

TABLE VII.—*continued.*

No.	Sex.	Age	Original Seat of Disease.	Spreading into	Portion of Lung Affected.	Secondary Growths.	Microscopical Appearances	Duration of Disease.	Remarks.
O 126	F Housework (married)	42	Bronchial glands	Right lung; right bronchus; pericardium; right auricle, left bronchus (slight); lower end of trachea (slight)	Right lung (growth the size of a large cocoa nut). The pleura contained a little fluid, and was loosely adherent all over	(1) Masses of new growth in *both* suprarenals, and in (2) left ovary	Lympho-sarcoma	9 months ..	Patient's chief symptoms were cough and pain in right side. Two months before death she was admitted with signs of effusion at the right base. Aspiration was performed on three occasions, on the last blood-stained fluid being withdrawn, but the patient gradually sank and died. The body was somewhat wasted. This patient also showed chronic pulmonary tuberculosis of the right lung. At the right apex were found a considerable number of miliary and racemose tubercles, some pigmented, but the majority more recent. (Tuberculous lesions, with giant cells, found microscopically.)
O 38	M Actor	62	Anterior mediastinal glands	Bronchial glands; left bronchus; pericardium; superior vena cava; and innominate veins	There was a mass of secondary growth (size of small tangerine orange) in the right upper lobe.	Nothing beyond the mass in the right lung	Lympho-sarcoma	*Doubtful* ..	The patient also had chronic pulmonary tuberculosis. There was an old contracted cavity with fibrosis in right upper lobe, and in the lower a good deal of fairly recent grey miliary tubercle. In the left lung the lesions were similar, but more advanced. Tubercle bacilli found. The patient's illness had been diagnosed as chronic pulmonary tuberculosis of the emphysematous type; the new growth was found unexpectedly *post mortem*. There had been no signs clinically of the invasion and compression of the great veins. The body was wasted.

REMARKS.

Of the 7 cases of malignant disease of the lung here tabulated, 1 was apparently a primary carcinoma of the organ, while the other 6 were lympho-sarcomatous in nature. In the latter the disease spread from the bronchial glands in 5 cases, and once from the anterior mediastinal glands. Six of the seven patients were males. Two of the cases (1 male and 1 female) were complicated by pulmonary tuberculosis affecting the lung also attacked by the new growth.

TABLE VIII.

ANALYSIS OF 19 CASES OF BRONCHIECTASIS.

No.	Sex.	Age.	Variety of Disease.	Lung chiefly affected	Lobes affected (Those in which the disease was most marked are in *italics*.)	Remarks on the Condition of the Bronchi.	Mode of Commencement of Disease.	Duration of Disease.	Complications.	Mode of Death.	General Remarks.
N 200	M	17	Cylindrical	Right and left	*Right upper, right lower, and left lower lobes*	Walls thickened and inflamed. Slight saccular dilatation of terminal end of tubes	Bronchitic	5 years cough and short breath, 2½ years fœtid expectoration	Three cerebral abscesses—(*a*) Left motor area, upper part (*b*) In right facial area (*c*) In right occipital lobe	Cerebral abscess	The three abscesses explained exactly the clinical symptoms observed during life—paresis of right arm and leg, left facial paralysis, and lateral hemianopia
N 204	F	27	Cylindrical	Right ..	*Right lower lobe*	Inflamed. Walls superficially ulcerated internally	Hæmoptysis on and off 5½ years	5½ years ...	Cerebellar abscess and meningitis. Right apical empyema	Cerebellar abscess and meningitis	The empyema affected anterior and upper part of right chest only, and pointed in 1st and 2nd spaces. It was opened and drained and had nearly closed when cerebral symptoms developed. The hæmoptysis was probably caused by the bronchiectasis, which had otherwise given no sign.
N 211	M	13	Cylindrical and saccular	Right ...	*Right lower lobe*	Bronchiectasis, chiefly saccular. Cavities size of a sparrow's egg	Bronchitic	Cough and offensive odour of breath, 9 months	Septic broncho-pneumonia. Pulmonary gangrene	Gangrene of lung	A gangrenous cavity size of a tangerine orange had formed in the right upper and middle lobe.
N 225	M	16	Cylindrical	Right ...	*Right lower lobe*, right middle and upper lobes	Walls thickened. Mucous membrane dark green in colour, as though from septic inflammation	,,	Cough, 7 years	Septic broncho-pneumonia; gangrenous cavity, the size of a pigeon's egg, in right upper lobe	Septic broncho-pneumonia. Gangrene of lung	
O 12	M	42	Cylindrical	Right ...	*Right middle, right lower lobes*, right upper, left upper and lower lobes	Walls thickened. Contained very foul-smelling secretion	,,	8 years ...	Septic broncho-pneumonia. Early patches of gangrene	Septic broncho-pneumonia. Gangrene	The bronchi contained very foul-smelling contents. At work as a potman and billiard marker till 4 days before death.

TABLE VIII.—*continued.*

No.	Sex.	Age.	Variety of Disease.	Lung chiefly affected	Lobes affected (Those in which the disease was most marked are in *italics*)	Remarks on the Condition of the Bronchi.	Mode of Commencement of Disease.	Duration of Disease.	Complications.	Mode of Death.	General Remarks.
O 30	M	39	Cylindrical and saccular	Right ...	Slight general affection of all bronchi, most marked in *right upper lobe*	Much congested. Filled with muco-pus, only slightly offensive	Bronchitic	Winter cough, 10 years	Emphysema ...	Bronchitis	Patient had hæmoptysis (profuse) 5 years ago. No sign of tubercle found in lungs, but both showed considerable general emphysema.
O 65	F	33	Cylindrical	Right ...	*Right middle* and *right lower lobe*	Inflamed. Contents very foul	Unresolved pneumonia	(?) 4 months	A cavity found in both middle and lower lobes, probably gangrenous in nature; now commencing to heal	Sudden syncope	Patient was having creosote baths and improving, when she died suddenly. The contents of cavities and tubes were very foul.
O 89	M	16	Saccular	Right ..	*Right upper, middle,* and *lower lobes*	Right lung converted into a series of largish cavities into which somewhat dilated bronchi entered, and from which other bronchi could be seen leading	Pneumonia	3 years ...	Lardaceous disease of liver, spleen, kidneys, and intestines	Gradual failure from septic absorption	The left lung showed some recent tubercle, but the case seemed one of true saccular bronchiectasis.
O 91	M	...	Cylindrical	Left ...	*Left lower* and *upper lobes*	Walls greatly inflamed and thickened. Tubes cylindrically dilated with a terminal saccular enlargement	... ...	... ...	Cerebral abscess. Lardaceous disease of spleen	Cerebral abscess	Patient had hæmoptysis several times. Abscess found in the right frontal lobe; it gave no localising symptoms.
O 151	M	34	Saccular	Left ...	*Left upper lobe*	The left upper lobe was almost occupied by one large cavity with two smaller ones connected with it. They were dilations of a large bronchus which opened into them. The walls of the cavity were smooth and on microscopical examination were found to contain muscle and cartilage	Bronchitic	Several years cough and short breath	Cerebral abscess. Right hemiplegia	Cerebral abscess	The abscess was under the left Rolandic area.

TABLE VIII.—*continued.*

No.	Sex.	Age	Variety of Disease.	Lung chiefly affected	Lobes affected (Those in which the disease was most marked are in *italics*.)	Remarks on the Condition of the Bronchi.	Mode of Commencement of Disease.	Duration of Disease.	Complications.	Mode of Death.	General Remarks.
O 176	M	36	Cylindrical	Left ...	*Left lower lobe*, left upper lobe, right lower lobe	Inflamed	Bronchitic	History says only 4½ months	Septic broncho-pneumonia in right lung	Septic broncho-pneumonia	One patch of broncho-pneumonia in the right lung had broken down into an abscess the size of a hazel-nut.
O 177	M	18	Cylindrical and saccular	Right and left	*Right upper, middle* and *lower lobes, left lower lobe*, left upper lobe	In left upper lobe a small bronchus opened into two small cavities (dilated bronchi) the size of peas. A similar cavity found in right upper lobe; but with these exceptions the dilatation was cylindrical	"Pleurisy and inflammation of lungs" 2¾ years ago, since then cough	2¾ years ...	Cerebral abscess, upper part of left frontal lobe	Cerebral abscess	Patient had hæmoptysis, ℥ iv., 6 months ago. The cerebral abscess gave no localising symptoms.
O 212	M	28	Cylindrical	Right ...	*Right upper lobe*	Bronchi in right upper lobe were alone dilated; walls red and ribbed; contained secretion not offensive. The cylindrical dilatation of the tubes was very obvious	Disease gave no symptoms	...	None ...	General bronchitis	Patient had extreme lateral curvature of the spine and died of acute bronchitis. The main bronchus to right upper lobe was a little constricted, but it seemed hardly enough to cause the bronchiectasis. There had been no symptoms of the disease during life.
N 217	M	33	Cylindrical	Right and left	*Every lobe* ...	Bronchi all obviously dilated, though the dilatation was not extreme. Walls thickened. There was no terminal enlargement of the tubes	Bronchitic	10 years cough. Sputum 2 years offensive	Slight emphysema	Acute general bronchitis	At the right apex there was a little old and recent tubercle. Symptoms of bronchiectasis marked during life.
N 145	M	21	Saccular	Right	Right middle and *lower lobes*	Two small bronchiectatic cavities in middle lobe; in lower lobe a larger one, size of tangerine orange	The condition complicated chronic pulmonary tuberculosis (13 months' duration), of which the patient died				There had been no symptom of bronchiectasis during life. Sputum not excessive nor foul. Bronchiectasis discovered *post mortem*.
N 152	F	47	Cylindrical and saccular	Right ...	*Right upper* and middle lobes	Tubes cylindrically dilated and in upper lobe two small saccular cavities found also in connection with the tubes	The condition complicated chronic pulmonary tuberculosis, of which, together with lardaceous disease the patient died				The bronchiectasis was only slight and had caused no special symptoms.

TABLE VIII.—*continued.*

No.	Sex.	Age.	Variety of Disease.	Lung chiefly affected	Lobes affected (Those in which the disease was most marked are in *italics*.)	Remarks on the Condition of the Bronchi.	Mode of Commencement of Disease.	Duration of Disease.	Complications.	Mode of Death.	General Remarks.
O 9	M	35	Cylindrical	Right ...	*Right lower lobe*, also other lobes of both lungs (slightly)	Walls thinned	The condition complicated chronic pulmonary tuberculosis (duration about 1 year), of which, together with early lardaceous disease, the patient died				The bronchietasis had not been diagnosed during life.
O 119	M	29	Cylindrical	Left ...	*Left lower lobe*, left upper (slight)	Some saccular enlargement at terminal ends of the dilated tubes	The patient died of subacute pulmonary tuberculosis				The dilatation of the bronchi in the left lower lobe was extensive and affected the entire lobe. The intervening lung tissue was fibrosed.
O 183	M	47	Cylindrical	Left ...	*Left lower lobe*	... ...	The condition complicated chronic pulmonary tuberculosis (of 7 years' duration), of which the patient died. There was also early lardaceous disease of liver				The bronchi in left lower lobe considerably dilated. The sputum was profuse, but not offensive, and the bronchiectasis was not suspected during life.

REMARKS.

(1) Of the 14 cases of simple bronchiectasis (uncomplicated with pulmonary tuberculosis), 12 were in males, 2 in females.

(2) The ages varied between 13 and 42, 5 occurring between 10 and 20, 5 between 30 and 40, 2 between 20 and 30, and 1 at 42.

(3) Of the 14 cases, 9 were examples of cylindrical bronchiectasis and 2 of saccular. In 3 cases, the cylindrical and saccular condition was combined.

(4) In 8 cases the disease affected the right lung, in 3 the left, while in 3 both lungs were markedly affected.

(5) In nearly all cases the lower portion of the lung was that chiefly affected, but *in 2 cases* (O 151 and O 212) *the upper lobe was* ALONE *affected*. In the former one large bronchiectatic cavity (with cartilage in its walls) occupied nearly the entire left upper lobe, while in the latter the right upper lobe was the seat of marked cylindrical bronchiectasis.

(6) Death in these 14 cases resulted as follows :—

In 4 from cerebral abscess.
,, 1 ,, cerebellar abscess.
,, 4 ,, septic broncho-pneumonia (with, in 3 cases, gangrene of the lung).

In 3 from general bronchitis.
,, 1 ,, sudden syncope.
,, 1 ,, septic absorption.

In 2 cases lardaceous disease was found *post mortem*.

(7) Of the 5 cases complicating pulmonary tuberculosis, none had shown symptoms during life by which the bronchiectasis could be diagnosed. In each case the patient died of the tuberculosis.

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