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Brompton.

MEDICAL REPORT,

1920





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MEDICAL REPORT

FOR THE YEAR 1920.

TABLE OF CONTENTS.

I.—Pulmonary Tubercule	osis with	Tubercl	e Bacilli	in the S	putum		4
II.—Mode of Onset							4
III.—Comparing the Mode	e of Onse	et in 19	20 with	that in	1919 wh	ich	
included the Influ	ienza Epi	idemic					5
IV.—527 Male Cases with	T.B. +	1919					5
585 ,, ,, ,,	+	1920					5
V.—Diseases of the Cardi	io-Vascul	ar Syste	m. Mal	es			6
VI.—Other Diseases of the	Chest.	Males					6
VII.—Miscellaneous Diseas	es. Male	es					7
VIII.—Pulmonary Tubercul	osis with	Tubercl	e Bacilli	in the S	putum		7
IX.—Mode of Onset							8
X.—Diseases of the Cardi	o-Vascul	ar Syste	m. Fen	nales			8
XI Other Diseases of the	Chest.	Female	s				9
XII.—Miscellaneous Diseas	ses. Fen	nales					9
Artificial Pneumothorax							9
Vital Capacity							13
Selected Cases							14
Report from the Clinical Lal	oratory	for the Y	Tear 1920				21
Statement of Cases of Disea	ases of th	e Throa	t, Nose	and Ear	referred	to	
the Throat Department	during th	e Year	1920				23
Report of Work done in the	Radiogra	phic De	partment	t during	1920		25
K-Ray Department, 1920							25
Report on the Cardiographic	Departm	ent for	1920				26
Report by the Dental Surge	on of th	ne Work	in the	Departm	ent for	the	
Years 1914-20							27
Cheatre Cases for 1920							27
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	Li	53					
	I	Ann	Rep				
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	VV	1 de	0				

Mospital for Consumption and Diseases of the Chest, Brompton, s.w.

The Registrar presents to the Committee of Management the Medical Report for the year 1920.

L. S. T. BURRELL, Registrar.

I.—PULMONARY TUBERCULOSIS WITH TUBERCLE BACILLI IN THE SPUTUM. 1920. MALES: 585 CASES.

AGE AT ONSET-				AGE AT O	NSET-			
0-10 years		2 (cases	Brou	ght for	ward	435	cases
10-15 ,,		10	,,	40-45	years		68	,,
15-20 ,,		76	,,	45-50	,,		46	,,
20-25 ,,		96	,,	50-55	,,		21	,,
25-30 ,,		97	,,	55-60	,,		11	,,
30-35 ,,		82	,,	60 +	,,		4	,,
35—40 ,,		72	,,	7	Cotal		585	,,
Carried for	vard	435	,,	213 Ye 05			-	

II.-MODE OF ONSET.

Age	Febrile attack	Pleurisy	Gradual	Hæmo- ptysis	Hoarse- ness	Bron- chitis	Pneu- monia	Other
010	0	-	2	0	0	0	0	-
10—15	1	1	7	1	0	0	0	-
15 - 20	14	1	39	14	1	0	2	5
20-25	10	8	53	18	5	1	0	1
25-30	10	7	56	17	2	3	1	1
30-35	9	5	48	16	1	1	1	1
35-40	8	7	44	7	0	2	1	3
40-45	8	9	37	11	2	1	_	_
45-50	3	2	28	5	7	1		_
50-55	0	1	18	2	0	0	-	
55-60	0	3	7	1	0	0	-	_
60 +	0	1	3	0	0	0	_	_
	63	45	342	92	18	9	5	11
Per cent.	10.8	7.7	58.0	15.7	3.8	1.6	0.8	1.9

III.—COMPARING THE MODE OF ONSET IN 1920 WITH THAT IN 1919, WHICH INCLUDED THE INFLUENZA EPIDEMIC. 1919. MALES: 527 CASES.

Age	Total	Febrile attack	Pleurisy	Gradual	Hæmo- ptysis	Bron- chitis	Pneu- monia	Other
0-10	5	-	1	1	_	1	1	1
10-15	15	7	1	6		_	1	_
15-20	72	24	5	28	12	_	3	_
20 - 25	85	16	9	43	11	-	2	4
25-30	100	24	8	51	14	1	_	2
30-35	90	20	6	46	14	1	_	3
35-40	69	10	6	34	16	2		1
40-45	53	10	3	28	9	2	1	_
45-50	24	. 2	1	14	3	2	_	2
50-55	12	1	_	11		-	_	-
5560	2	_	_	2			_	_
60 +	_	_	_	_	_		10000	
	527	114	40	264	79	9	8	13
Per cent.	_	21.6	7.5	50	15	1.7	1.5	2.5

IV527 MALE	CASES 1919	585 MALE CASES WITH T.B. + 1920					
Sudden onset with	febrile a	ttack	21.6 p	er cent.		10.8 p	er cent.
Gradual onset			50.0	,,		58.0	,,
Hæmoptysis			15.0	,,		15.7	,,
Pleurisy			7.5	,,		7.7	,,
Bronchitis			1.7	,,		1.6	,,
Pneumonia			1.5	,,		0.8	,,
Other causes			2.4	,,		5.7	1,

Of these 585 male cases, 469 (80 per cent.) improved, 46 (7.9 per cent.) were stationary, 32 (5.6 per cent.) were worse, and 38 (6.5 per cent.) died. 390 were sent to a sanatorium.

477 gained weight in the hospital, 25 lost weight, and 83 were not weighed; many of these being seriously ill, no doubt lost weight.

In considering all these figures, it must be remembered that only those cases in which T.B. have been found in the sputum are included.

210 male cases were diagnosed as pulmonary tuberculosis, but no T.B. were found in the sputum.

Of these, 192 (91.5 per cent.) improved, 2 died, and 16 were either worse or showed no improvement. 121 were sent to a sanatorium.

In 154 cases sent in for suspected pulmonary tuberculosis this diagnosis was not confirmed.

V.—DISEASES OF THE CARDIO-VASCULAR SYSTEM. MALES.

			Improved	Stationary	Worse	Died	Total
Pericarditis			1	_	-	-	1
Mitral regurgitation			1	_	-	-	1
Mitral stenosis			3	_	_	-	3
Double mitral disease			5	_	_	-	5
Aortic regurgitation		· · ·	3	_	_	1	4
Dilated heart			1	_	_		1
Myocardial degenerat	ion		1	_	-	-	1
Auricular fibrillation			1	_		_	1
Malignant endocardit	is		_	_	_	1	1
Aneurysm of the thora	acic ao	rta	2	-	_	_	2

VI.-OTHER DISEASES OF THE CHEST. MALES.

		Improved	Stationary	Worse	Died	Total
Bronchitis		 96	12	_	_	108
Bronchitis and emphys	ema	 16	_		-	16
Asthma		 25		_	_	25
Bronchiectasis .		 17	3	_	2	22
Fœtid bronchitis .		 1	_	-	_	1
Mediastinal glands .		 3		-	-	3
Sarcoma of mediastinu	ım	 	1	-	5	6
Cancer of pleura .		 _	_	_	2	2
Cancer of lung .		 _	1	-	-	1
Actinomycosis of lung		 -	_	_	1	1
Fibrosis of lung .		 12	2	_	_	14
Unresolved pneumonia		 4	-	_	_	4
Abscess of lung .		 -	-	-	1	1
Hydropneumothorax .		 1	_	_	0-10	1
Pleurisy		 23	_	_	_	23
Pleural effusion		 16	_	-		16
Empyema		 7	_	-	-	7

VII.-MISCELLANEOUS DISEASES. MALES.

		Improved	Stationary	Worse	Died	Total
Acute miliary tuberculosi	s	_	-	_	3	3
Chronic laryngitis		4	_	-	-	4
Epithelioma of larynx		1		_	_	1
Fibroma of larynx		1	_	-	_	1
Enlarged tonsils		9	_			9
Enlarged glands of neck		5	_	_	_	5
Deflected septum		31		_	_	31
Scoliosis		6	,	_	-	6
Gastric ulcer		2	_			2
Duodenal ulcer		1		-	-	1
Appendicitis		1	_		-	1
Tuberculous peritonitis		1	-	_	-	1
Tuberculous testis		1	_	_	_	1
Chronic nephritis		2	_	_	-	2
Tabes		2	_	-	-	2
Lymphatic leukæmia			_	-	1	1
Influenza		1	_	-		1
Debility		11		-	_	11
Anæmia		3	_		_	3
Neurasthenia		3	-		_	- 3
Unclassified		17	-	-	-	17

VIII.—PULMONARY TUBERCULOSIS WITH TUBERCLE BACILLI IN THE SPUTUM. 1920. FEMALES: 322 CASES.

AGE AT ONSET-		AGE AT ONSET-	
0-10 years .	. — cases	Brought forward	297 cases
10-15 ,, .	. 13 ,,	40—45 years	13 ,,
15-20 ,, .	. 52 ,,	45-50 ,,	6 ,,
20-25 ,, .	. 75 ,,	50-55 ,,	4 ,,
25-30 ,, .	. 62 ,,	55-60 ,,	2 ,,
30-35 ,, .	. 49 ,,	60 + ,,	- ,,
35-40 ,, .	. 46 ,,	Total	322 ,,
Carried forwar	1 297 ,,		

IX.-MODE OF ONSET.

Age	Febrile attack	Pleurisy	Gradual	Hæmo- ptysis	Hoarse- ness	Bron- chitis	Pneu- monia	Other causes
10-15	3	2	7	_	_	_		1
15-20	6	2	31	9	2	1	1	_
20-25	12	9	43	6	3	1	_	1
25-30	6	4	. 39	12	1	_	_	_
30-35	5	4	34	5	-	1	-	-
35-40	6	6	30	4	-	_	-	-
40-45	1	2	5	4	-	1	_	_
45-50	1	_	3	1	1	-	-	
50-55	1	1	2	_		_		-
55-60	-	-	2	-	_		-	
		_						-
	41	30	196	41	7	4	1	2
Per cent.	12.7	9.3	61.0	12.7	2.2	1.2	0.3	0.6

Of these 322 female cases 224 (70 per cent.) improved, 43 (13 per cent.) were stationary, 43 (13 per cent.) were worse, and 12 (5 per cent.) died.

159 were sent to a sanatorium.

198 gained weight in the hospital, and 36 lost weight, 88 were not weighed.
160 female cases were diagnosed as pulmonary tuberculosis, but no T.B.
were found in the sputum.

Of these, 138 (86.5 per cent.) improved, and 26 were either worse or showed no improvement. 93 were sent to a sanatorium.

In 44 cases sent in for suspected pulmonary tuberculosis the diagnosis was not confirmed.

X .- DISEASES OF THE CARDIO-VASCULAR SYSTEM. FEMALES.

			Improved	Stationary	Worse	Died	Total
Pericardial effusion			1		-		1
Mitral regurgitation			5		-	_	5
Mitral stenosis			4	_		_	4
Double mitral disease			6	_	_		6
Myocarditis			1		_	_	1
Malignant endocarditi	s		_	_	_	1	1
Tachycardia			1		-	-	1
Congenital heart disea	se	,,		-	_		1

XI.—OTHER DISEASES OF THE CHEST. FEMALES.

		Improved	Stationary	Worse	Died	Total
Bronchitis		 31	5	-		36
Bronchitis and emph	ysema	 6	1		_	7
Asthma		 12	2	-	-	14
Bronchiectasis		 12	1	_	-	13
Bronchorrhœa		 1	-		-	1
Mediastinal glands		 2	_	_	-	2
Sarcoma of mediastin	num	 _	_		1	1
Cancer of lung		 / -	_	1	2	3
Fibrosis of lung		 4	1		-	5
Unresolved pneumon	ia	 6	-	_	-	6
Pneumonia		 2	_	_	-	1
Pleurisy		 6	-	-	-	6
Pleural effasion		 5	-	-		5
Empyema		 2	-		-	2
Tubercle of rib		 1	-			1
Chronic mastitis		 1	-			1

XII. - MISCELLANEOUS DISEASES. FEMALES.

	Improved	Stationary	Worse	Died	Total
Acute miliary tuberculosis	 -	-	-	1	1
Laryngitis	 1	_	-	-	1
Enlarged tonsils	 5	-	-		5
Enlarged glands of neck	 7		-	-	7
Deflected septum	 3	_	_	-	3
Stenosis of œsophagus	 1	-	-	-	1
Gastric ulcer	 1	-	-	-	1
Appendicitis	 2	_	-	_	2
Cirrhosis of liver	 	1	-	_	1
Pelvic tumour	 -	1	_	_	1
Tuberculous peritonitis	 2		-	_	2
Tuberculous dactylitis	 1	_	_	_	1
Tuberculous knee	 1		-	-	1
Exophthalmic goitre	 1				1
Debility	 20	-		_	20
Anæmia	 4	-		-	4

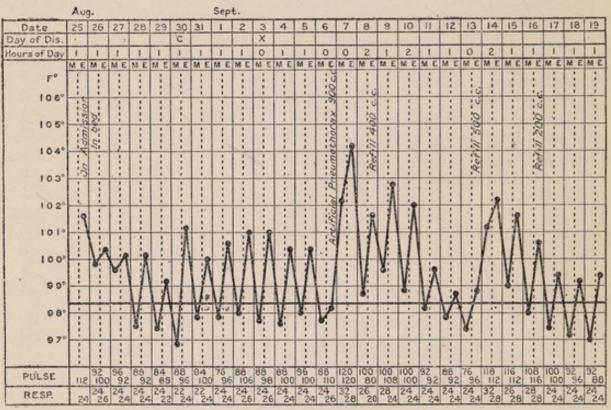
Artificial Pneumothorax.

This operation was performed on 39 patients during 1920. 331 re-inflations were done.

In 3 cases the operation could not be performed owing to adhesions. In 2 cases although some gas was put into the pleural cavity, the adhesions were so dense that after 2 or 3 re-inflations the treatment was discontinued.

The operation was performed for bronchiectasis in 3 cases and they all were much improved. These cases are described under selected cases Nos. 13, 14, 15.

CHART I.



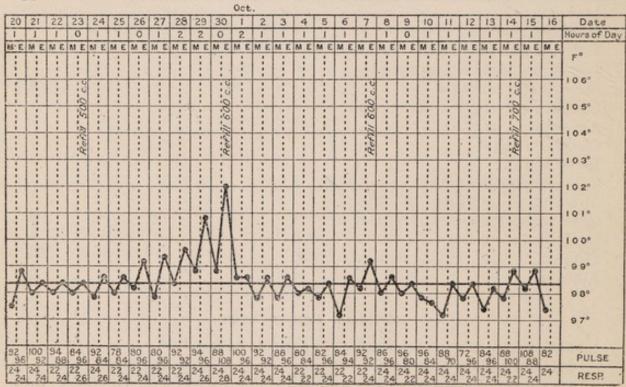
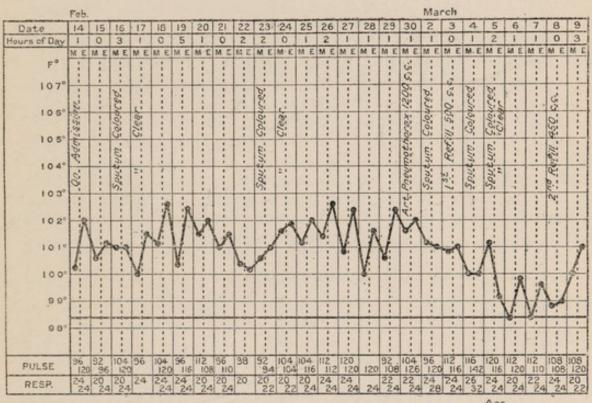
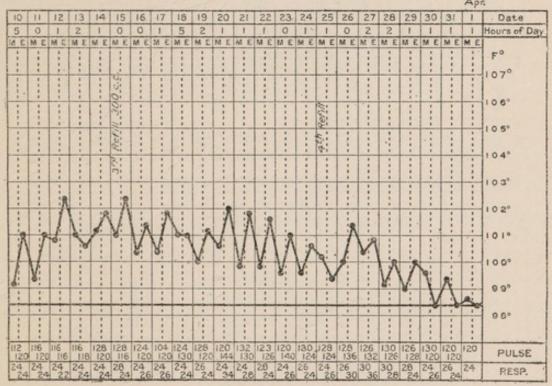
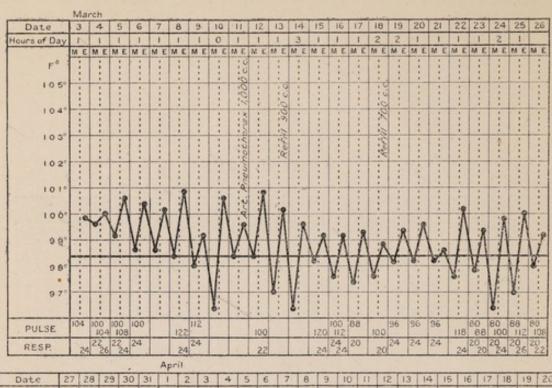
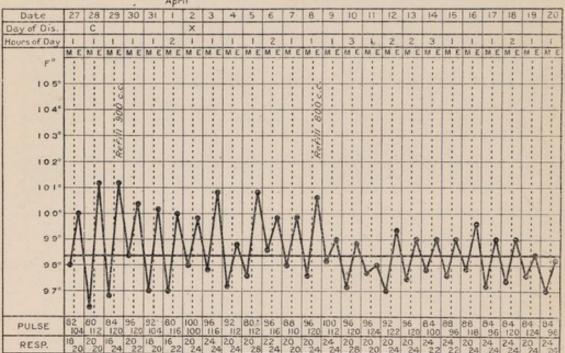


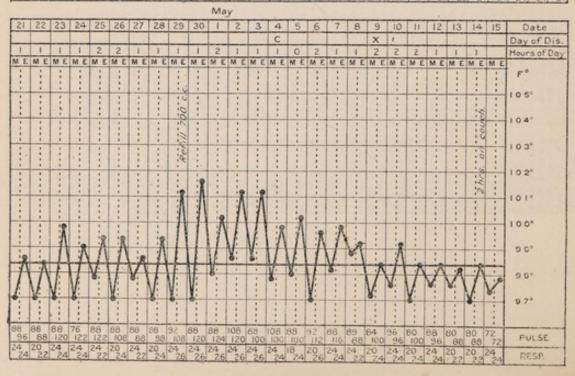
CHART II.











In 1 case of bronchiectasis a pneumothorax could not be produced, and in another so little gas was got in that the operation had to be discontinued.

It was performed 6 times to check hæmoptysis, and in 5 was completely successful. In 1 case the attacks of hæmoptysis continued.

In 24 cases it was performed for spreading tuberculosis of the lung. Of these 2 continued to get worse and 1 died. In 4 there was no apparent change either for better or worse. In 18 there was improvement.

In 5 cases the operation was done as a last chance on patients with very advanced and acute disease. Of these 4 died and 1 improved sufficiently to get up a little each day.

The 3 charts show the effect of the operation on temperature.

In the first a big reaction is seen and in this case a large initial dose of gas was given to check a large hæmoptysis.

No case of gas embolism or pleural shock occurred.

In 3 cases an oxygen replacement was done for pleural effusion, when the fluid continually and rapidly reformed after aspiration. In 1 of these cases the patient died of carcinoma of pleura. Both the others made good recoveries. Details of these 3 cases are given under selected cases Nos. 10, 11, 12.

Vital Capacity.

Professor Dreyer has pointed out that there is a definite relationship between certain body measurements and the vital capacity.

The vital capacity has been taken in over 400 cases at this hospital and it is found that in pulmonary tuberculosis it is always below normal. It is also lowered in other diseases, so that the test has no great value as a means of diagnosing pulmonary tuberculosis. It is found, however, that as the disease progresses the vital capacity falls and that as the patient improves the vital capacity rises. The following cases illustrate this:—

```
(1) Male, aet. 56. Extensive tuberculosis, both lungs.
  May,
         1919 .. Vital capacity - 50 per cent.
  October ,,
                     ,, ,, -55
  March, 1920
                                -62
                    ,,
                          ,, - 75
  August, ,, .. ,,
                                              And the patient was
                                                then just able to get
                                                about.
(2) Male, aet. 23. Infiltration, left apex. T.B. +
  January, 1920 .. Vital capacity - 60 per cent.
                    ,, ,, - 38
                                              Just gone to Frimley.
  April,
           ,,
  May.
                                - 35
           . ,,
                . .
                     ,,
                           2.5
                                -25
  June.
                . .
           ,,
                    2.5
(3) Male, act. 51. Extensive left-sided disease. Getting worse.
  May, 1919 .. Vital capacity - 35 per cent. Artificial
                                                          pneumo-
                                                 thorax performed
                                                 later in May.
  October, ,,
                                 -41
  January, 1920
                                 - 36
                            ,,
                     "
  April, ,,
                                 -30
                     "
  October, ,,
                                - 32
                                               Keeping fit and at
                          3.2
                     ,,
```

work.

- (4) Male, act. 23. No physical signs. No T.B. was found. C.F.T. negative. No disease seen with X-ray, but history of repeated hæmoptysis. Vital capacity + 8 per cent.
 - (5) Male, aet. 21. Extensive disease, both lungs.
 October, 1919 .. Vital capacity 35 per cent.
 January, 1920 .. ,, , 72 ,, Died, April.

In many cases it is found that the vital capacity remains with little or no variation month after month in spite of treatment and these are being followed up to see if a persistently low vital capacity is of value in prognosis.

SELECTED CASES.

 Bronchiectasis following Pleural Effusion. (Sir P. H.-S. Hartley.)

Female, aet. 17, admitted February-11, 1920; discharged April 30.

The patient was quite well until 1911, when she had right pleural effusion; was aspirated four times. She also developed tuberculous peritonitis with ascites, and was tapped fourteen times. She was in bed for twelve months with this illness, and a right-sided bronchiectasis developed gradually. She also has developed scoliosis. On admission she had from 10 to 15 oz. of offensive sputum daily, but this was reduced to from 2 to 3 oz. on discharge.

Apical Bronchiectasis. (Dr. Batty Shaw.)

Female, aet. 33, school teacher, admitted September 22, 1919.

The patient had good health until a year ago, when she had bronchitis and left-sided pleurisy. She was in bed for two weeks, and away from work for two months. The cough remained and sputum increased, until now she spits up about 6 oz. of offensive sputum daily. Examination revealed signs at the left apex, and the X-rays showed a dense triangular opacity at the left apex. No elastic tissue and no T.B. were found in the sputum after repeated examination. The patient improved considerably, and the sputum was reduced to about half an ounce daily, when she was discharged on February 21, 1920.

3. Bronchorrhæa.

(Dr. Wall.)

Female, act. 30, admitted August 13, 1920; discharged November 5.

The patient was well until Christmas day, 1919. She then began an acute illness which started suddenly with diarrhoea and vomiting, and was followed by acute bronchitis. She had copious expectoration, sometimes tinged with blood, and was in bed for three months. The cough and sputum continued, and on admission she was coughing up about 15 to 20 oz. daily. On examination there was impairment to percussion and harsh B.S. at the right apex, but no adventitious sounds. X-rays showed dense root shadows, but no evidence of infiltration of lung. No T.B. found after repeated examination. On discharge the sputum was slightly less.

4. Fætid Bronchitis.

(Dr. Wall.)

Male, aet. 34, admitted March 19; discharged April 1.

The patient had influenza several times, the last attack being on January 16. Since then he has had a cough and expectoration. The sputum became copious and very offensive at the end of January, and was dark brown in colour. On February 10 and 25 autogenous vaccine was given (10 million). About five days after both doses hemoptysis occurred. On examination, dulness, bronchial B.S. and râles were found at the right base. The sputum contained no T.B. but practically a pure growth of pneumococcus. The patient was treated with creosote inhalation and creosote by the mouth.

On discharge there was no sputum and no abnormal physical signs were found.

5. Bronchiectasis. Cerebral Abscess.

(Dr. Young.)

Male, aet. 41, admitted October 24, 1919.

Cough started twelve months before admission, following an attack of bronchitis. It gradually got worse, and the sputum increased and became offensive.

Physical signs of fibrosis, excavation at left apex.

On November 20 the patient began to have headaches in the right supraorbital region. On November 23 his mental condition was slightly dulled, gait ataxic, some weakness in left arm and leg, left plantar reflex was extensor, left pupil was larger than right, and left homonymous hemianopia was present. On November 31 a series of twitchings began on left side and the next day there was flaccid paralysis all down the left side. Decompression operation, but no abscess found. The patient died January 18, 1920.

Post-mortem.—Lungs: Left upper lobe contained dilated bronchi and three bronchiectatic cavities. Much fibrosis of lung tissue. The upper part of the left lower lobe contained a few dilated bronchi. No disease of right lung. The brain substance was bulging through the operation wound. Section through the right cerebral hemisphere showed the posterior part bathed in pus and an ill-defined abscess cavity wall was seen. Both lateral ventricles contained greenish pus.

6. Streptotrichosis.

(Sir P. H.-S. Hartley.)

Male, aet. 45, admitted January 24, 1920.

The patient had good health until October, 1919, when he had pleurisy. Since then he has had cough, expectoration and slight hæmoptyses. Physical signs: dulness, râles and bronchial breathing over right base. Few râles at both apices. X-rays showed dense shadow right base and mottling right apex. Right base was explored and no pus was found. No T.B. in sputum. Leucocytosis 20,000. An abscess doveloped in right axilla, and pus from this was found to have streptothrix. The patient was treated with potassium iodide, but without result. The temperature varied from 100° to 102° whilst in hospital, and the patient died March 20.

Post-mortem.—Pus was found in the anterior mediastinum, and was tracking its way through the chest wall to right of sternum. 26 oz. of turbid

yellow fluid were found in the right pleural cavity, the lung was collapsed, but was connected with the chest wall by several firm adhesions in the axillary region; left pleura was firmly adherent. Pus was present in the posterior mediastinum. The posterior part of the right lung presented a necrotic appearance with several cavities containing thick pus. The left lung was not invaded. The pericardium was much thickened, and the visceral and parietal pericardium were firmly adherent.

7. Lymphatic Leukæmia.

(Dr. Gosse.)

Male, aet. 21, admitted July 24, 1920.

The patient had rheumatic fever five months before admission, and developed pneumonia at the same time. Dyspnœa had been increasing for three months, and enlarged gland in the neck noticed for one month. Slight cough and scanty sputum. No T.B.

Physical signs. Dulness and râles at left apex. Gums spongy. Petechiæ on legs, considerable tenderness over abdomen, but neither liver nor spleen were palpable. Patient died August 6.

Blood count: Hæmoglobin, 35 per cent.; R.B.C. 1,840,000; much poikilocytosis; some nucleated red cells; white cells 350,000; 93.8 per cent. lymphocytes; polymorphonuclear cells, 6.6 per cent.; eosinophiles, 0.4 per cent.; basophiles, 0.2 per cent.

Post-mortem.—Petechiæ on walls of heart. Lymph follicles on upper and lower end of oesophagus. The spleen weighed 15 oz. The liver and kidneys were pale. Bronchial and mediastinal glands were enlarged. The left upper lobe and right lower lobe of the lungs were solid.

Miliary Tuberculosis. (Dr. Batty Shaw.)

Male, aet. 16, admitted April, 1919; died February 9, 1920.

The patient was well until he had influenza in January, 1919. Since then he had cough, expectoration and dyspnœa.

On admission, he was found to have dulness, and weak breath sounds at the right base. The abdomen was tense, but nothing abnormal was felt. The temperature ranged from 102° to 98°.

The right base was explored for pus without result on several occasions. Dulness developed at left base and a skodaic note with bronchial breathing was found at the left apex.

On August 3 both bases were explored, but no fluid found. At that time the left wrist began to swell and was tender. The blood count was 8,700 leucocytes and the blood cultures sterile. At the end of August a painful nodule appeared on the right occipital protuberance. Later nodules developed on the sternum, right knee and right thumb, and the left wrist remained swollen and tender. In December convulsions and signs of meningitis developed. At that time both bases were dull, few crepitations heard at bases, bronchial breathing at both apices. The heart was pulled out to the left and an apical systolic murmur was present. The abdomen was distended and tender over the gall bladder, but nothing abnormal was felt.

Post-mortem.—Right lung was normal except for a little consolidation at the base. In the left lung a small cavity with fibrous walls was found adjacent to

the caseous bronchial glands which was present between that lung and the trachea. Tubercles were present in the liver, spleen and kidneys. No macroscopic signs of tuberculosis were found in the intestine, brain or membranes of the brain. T.B. were found in the spleen. There was considerable thickening of the synovial membrane of both sterno-clavicular joints and of the right knee joint. There was also erosion of the cartilage of both sterno-clavicular joints.

9. Spontaneous Pneumothorax.

(Dr. Perkins.)

Male, aet. 49, admitted May, 1920.

Has suffered from winter cough for years. Bad cough for six weeks. One week ago he had a sudden attack of pain in right side with severe dyspnæa. On admission he had complete pneumothorax on right side and bronchitis on left. The temperature ranged from 101° to 103°, but gradually fell until it became normal after three weeks. Clear fluid formed in the right pleural cavity. The temperature remained normal. The patient gained a stone in weight during his ninety-six days in hospital whence he was discharged to a sanatorium. There the fluid was replaced by air on five occasions and the patient returned to work in January, 1921. He then had very little fluid. The treatment is being continued in the out-patient department.

10. Recurrent Pleural Effusion.

(Dr. Young.)

Male, aet. 44, admitted July 26, 1920.

The patient had good health until January, 1920, when he developed pleurisy with effusion. The fluid was aspirated five times before admission, but on admission he was found to have a complete left pleural effusion.

On August 12, 740 c.c. clear fluid were removed and 900 c.c. of oxygen put into the pleural cavity.

On September 23, 1,400 c.c. fluid removed and 1,100 c.c. oxygen put in.

On October 28, 1,800 c.c. fluid removed, 2,000 c.c. air and 10 c.c. of 2 per cent. formalin in glycerine injected.

On November 25, 500 c.c. fluid removed and 600 c.c. air and 10 c.c. of 2 per cent. formalin in glycerine injected.

On December 30, the patient was seen again and no fluid was present and he had returned to work.

11. Recurrent Pleural Effusion, following Artificial Pneumothorax.

(Dr. Perkins.)

June 11 to October 16, 1920.

The patient, a male of 42, had dry pleurisy in 1916. Pulmonary tuberculosis with T.B. in the sputum developed in 1917 and he went to Frimley. There a right artificial pneumothorax was performed and fluid formed in the right pleural cavity in February, 1919. No further refill was given and the patient remained in fairly good condition until June, 1920, when he became an inpatient at this hospital suffering from severe dyspnæa, but otherwise in fairly good condition. No T.B. present in the sputum.

On June 14, 1920, 1,700 c.c. of greenish fluid were removed and 1,500 c.c. of

air introduced into the pleural cavity. Cholesterin crystals but no microorganisms were found in the fluid.

On June 21, 3,000 c.c. fluid were removed and 2,900 c.c. air put in.

On July 12, 600 c.c. of fluid were removed and 400 c.c. of air put in.

On August 30, 1,200 c.c. fluid were removed and 1,000 c.c. of oxygen put in.

On October 7, 1,300 c.c. of fluid were withdrawn and 1,600 c.c. of air put in.

On December 9, 425 c.c. of fluid were removed and 900 c.c. of air put in. Seen again in January, 1921, there was very little fluid in the pleural cavity and the patient was in good health. The vital capacity on admission was -45 per cent. and on discharge -34.2 per cent.

12. Carcinoma of Pleura.

(Dr. Perkins.)

Male, aet. 45, admitted October 18; died November 18, 1920.

The patient had a cough since the beginning of 1919. In March, 1920, he had pleurisy and was in bed for two months. Since then he has had pain in the right side and increasing dyspnæa.

On admission he was very dyspnœic and had a brassy cough. There were signs of a large right pleural effusion.

On October 27, 60 oz. of clear fluid were removed. The report on this fluid stated that a large number of mononuclear leucocytes were seen and also many large cells with nuclei at the side and in a few cases with two or three nuclei.

On November 8, 115 oz. (3,200 c.c.) of fluid were removed and 1,400 c.c. of air introduced, the intra-pleural pressure being then -6-12.

On November 11, 25 oz. of fluid were removed and no air put in.

On November 18 the patient had a violent attack of dyspnœa and died.

Post-mortem.—On opening the chest gas escaped under considerable pressure. The right pleural cavity contained 90 oz. of blood-stained fluid. In films of the fluid were very large numbers of streptococci.

Practically the whole of both visceral and parietal pleuræ were much thickened and invaded by new growth. The appearance of the surfaces was yellowish-white and distributed over them were shallow depressions presenting raw, bleeding surfaces but no definite ulceration. These depressions varied in size from a pin point to circular or oval areas the size of a threepenny-piece.

The right lung was completely collapsed and could only be slightly inflated with the blow-pipe. The new growth did not extend into the lung tissues.

Sections of the pleura showed that the thickening was due to a great development of fibrous tissue enclosing small areas of new growth. Where such areas reached the surface were the raw depressions referred to above. The growth is probably a carcinoma, though there are certain indications that it might be classed as an endothelioma.

13. Bronchiectasis Treated by Artificial Pneumothorax.

(Dr. Perkins.)

Female, aet. 32, admitted May, 1920; discharged June, 1920.

The patient had good health until 1914, when she had a cough and began to cough up a large quantity of sputum. She also had hæmoptysis and has coughed up about a cupful of blood every three or four months since.

On admission she had dulness and râles at the right base and the X-ray showed a heavy shadow at the right base.

Artificial pneumothorax was induced on June 4, 1920, and the patient was free from hæmoptysis after this, except for a few streaks in September. In December, there was slight cough, no sputum and the patient was doing full work.

14. Bronchiectasis Treated by Artificial Pneumothorax.

. (Dr. Perkins.)

Male, aet. 41; October, 1920.

The patient had dry pleurisy in March, 1919. Cough and copious expectoration followed, and in October he was brought up to the out-patient department in an ambulance and was at once admitted into the hospital. He was very toxic and there were signs of fibrosis and excavation at the left base. He coughed up a large quantity of offensive sputum and had been unable to work for four months.

Artificial pneumothorax was performed on October 16, and the patient's general condition rapidly improved. His cough became less and the quantity of sputum much diminished.

In January, 1921, he returned to work and he still attends the out-patient department for refills.

15. Bronchiectasis Treated by Artificial Pneumothorax.

(Dr. Perkins.)

Female, aet. 34, admitted September 20; discharged December 5, 1920.

The patient had good health until August, 1919, when she had a difficult confinement. Cough started after this and became worse, and she had much offensive sputum. Three months ago she had hæmoptysis (4 oz.) and on two occasions since she has had hæmoptysis (about 6 oz. each time). No T.B. found. Dulness, bronchial breath sounds and crepitations at the left base. On September 30, artificial pneumothorax was performed. The patient made good progress, and on discharge she had gained 6 lb. in weight and the sputum was diminished in quantity. Seen again in January, 1921, she was found to be keeping fit. The cough and sputum were less and she had been attending to her household work without discomfort. The treatment is being continued in the out-patient department.

16. Gangrene of Lung. (Dr. Batty Shaw.)

Male, aet. 32, admitted September 24; died November 27, 1920.

The patient had dry pleurisy four months ago in the right axilla. There was hæmoptysis at the time. This was followed by cough and copious brown offensive sputum. No T.B. No elastic tissue.

On examination there was much dulness at right apex and the X-ray showed a dense shadow there.

Operation was performed on October 22, and a gangrenous patch fixed to the wall of the chest by adhesions, was seen in the right axilla over the second and third ribs. The right upper lobe was very hard and had a white deposit on its surface. Part of the sixth rib was resected and a drainage tube inserted. Much offensive pus was drained away, but the patient never recovered.

Post-mortem. —The whole of the anterior surface of the right visceral pleura

was covered with greenish, gangrenous material. At the posterior surface of the lung the pleura was thickened and adherent.

Practically the whole of the right lung was solid with recent pneumonia. In the middle of the anterior surface of the lung was a gangrenous cavity communicating with the operation wound. The cavity was 2 in. by 1 in. Two smaller gangrenous cavities were present in the right upper lobe.

17. Chronic Pulmonary Tuberculosis.

(Dr. Perkins.)

Male, aet. 38, admitted August 25; discharged November 3, 1920.

The patient was an in-patient of this hospital in 1905 with pulmonary tuber-culosis. He went to Frimley, and since his discharge has been working as a mechanic. He kept quite well until March, 1920, when he had influenza and bronchitis. Cough continued after this and T.B. was found in the sputum. On admission dulness, bronchial breath sounds and moist râles were detected at the right apex. He improved considerably and was sent to Frimley. On discharge from Frimley, in February, 1921, he had gained 13 lb. in weight. No T.B. was found in the sputum and he returned to work.

18. Abstract from Report on the Heart by Dr. Arthur Keith.

(Dr. Batty Shaw.)

Child, aet. 7 months.

In this patient all parts of the body were transposed, the heart being on the right, the liver on the left, the spleen on the right; the stomach, small and large bowel, the kidneys, adrenals, arteries and veins all lying as in a mirrored image of the normal disposition. The great veins are also affected, the inferior vena cava ascending to the left of the spine, and the superior vena cava receiving an azygos vein descending in front of the root of the left lung, to enter a systemic auricle—a right auricle transposed to the left side. There has been transposition of the auricles, although the pulmonary veins do not enter the pulmonary auricle, but the systemic.

All the blood from the lungs and from the body was received in one chamber of the heart, the systemic (normal right) auricle. From that auricle it entered the left ventricle and that chamber served as pulmonary and systemic pump—the only blood reaching the systemic circulation being that which passed into the aorta, by a constricted ductus arteriosus. The two other chambers of the heart, the pulmonary auricle and right ventricle, although fully developed, appear to have taken no part in carrying on the circulation.

L. S. T. BURRELL, Registrar.

REPORT FROM THE CLINICAL LABORATORY FOR THE YEAR 1920.

The last report from the Clinical Laboratory was issued for the year 1914. At the end of February, 1915, the Superintendent was granted leave by the Committee of Management to proceed to France to help in the investigation of an outbreak of enteric fever in the British Expeditionary Force. From that time until his demobilization in March, 1919, his services were retained by the Medical Research Council of the War Office (A.M.D. 2) for laboratory investigations in connection with sickness in the Army: (1) typhoid and paratyphoid fevers; (2) the septic infections of war wounds and gas gangrene; (3) the diagnosis and prevention of dysentery. In all, seven reports were made to the Director-General Army Medical Service.

Dr. H. A. Treadgold, the Assistant Pathologist in 1913-14, joined the R.A.M.C. in 1914 and later transferred to the R.A.F.

Thus during nearly the whole of the war the laboratory examinations remained in the hands of Mr. W. J. Dredge, the Laboratory Assistant, under the general supervision of the resident medical officer. It is a pleasure to record that the work was carried out in a very satisfactory manner. From 1916-18 he performed, single-handed, no less than 16,989 examinations of the sputum, and 807 special examinations for the physicians of the hospital.

During the year 1919, the following routine examinations were carried out at the request of the physicians and surgeons to the hospital:—

		-	
Special examinations of sputum		 	 53
Examinations of pleural effusions		 	 39
Examinations of pus		 	 35
Examinations of blood		 	 16
Examinations of urine		 	 12
Examinations of pathological tissu	ies	 	 12
Examinations of fæces		 	 9
Examinations of throat swabs		 	 8
Examinations of spinal fluid		 	 2
Wassermann reactions		 	 73
Vaccines prepared		 	 31
Miscellaneous examinations		 	 6
			296

During the year 1920 the following routine examinations were carried out at the request of the physicians and surgeons to the hospital:—

Special examinations of sputum		 	 127
Examinations of pleural effusions		 	 64
Examinations of pus		 	 27
Examinations of blood		 	 53
Examinations of urine		 	 14
Examinations of pathological tissu	ies	 	 16
Examinations of fæces		 	 9
Examinations of throat swabs		 	 87
Examinations of spinal fluid		 	 4
Wassermann reactions		 	 117
Vaccines prepared		 	 68
Blood tests for tuberculosis		 	 399
Miscellaneous examinations		 	 27

In 1913-14 Dr. H. A. Treadgold undertook some investigations into the significance of Arneth's reaction in the blood, with particular reference to pulmonary tuberculosis. This work had to be discontinued owing to the outbreak of war. In March, 1920, Dr. Treadgold went through his old figures and published his results in the *Lancet* of March 27.

From his experiments he felt justified in arriving at the following conclusions:—

- (1) That a shift to the left is usually present in cases of active pulmonary tuberculosis, the degree of shift being most marked, and generally progressive, in dying cases. It is less marked and is apt to remain fairly constant in cases which do not improve under treatment, while cases definitely improving usually show the least degree of shift, and this becomes progressively less as improvement continues.
- (2) While this is true as a general rule, there are exceptions which do not conform, notably right shift (1 case).
- (3) It is inadvisable and dangerous to draw any conclusions from single Arneth examinations. At least three, extending over a period of some weeks, should be made. Evidence obtained in this way may often prove of help as a key to the progress of the patient.
- (4) A constant and marked left shift in early suspected cases of pulmonary tuberculosis, where other sources of infection can be excluded, is presumptive evidence of active mischief.
- (5) A left shift under 200 in old cases of "clinical arrest" is suggestive of recurrence and calls for minute and careful re-examination.

In 1920, Dr. D. S. Page, late Assistant Resident Medical Officer, analysed the reports sent from the laboratory on the examination of pleural effusions. His paper appeared in the *Lancet* of March 13, 1920.

In the summary at the end of his paper he says :-

- (1) A predominance of polymorphonuclear neutrophilic cells occurs not uncommonly in chronic pleural effusion complicating pulmonary tuberculosis. When it occurs, in the absence of secondary infection of the fluid, it suggests the possibility of hydropneumothorax being present; probably it may occur without this complication as the result of a virulent tuberculous infection.
- (2) A predominance of small mononuclear cells is usual in tuberculous pleural effusions. It is not uncommon in effusions associated with neoplasms. It may occur in renal cases.
- (3) Effusions in which coarsely granular eosinophilic cells are found in large numbers are probably not tuberculous.
 - (4) Basophilic cells occur rarely, and only in small numbers.

Dr. Irene Yates has been elected assistant in the laboratory for the ensuing year.

The Superintendent is carrying out researches under the Medical Research Council, and has been elected a member of the Bacteriological Sub-committee of the Tuberculosis Committee of that body.

A. C. INMAN, Superintendent of Laboratories. STATEMENT OF CASES OF DISEASES OF THE THROAT, NOSE AND EAR REFERRED TO THE THROAT DEPARTMENT DURING THE YEAR 1920.

During the year 1920, 1,190 new cases were referred to the Throat and Ear Department, 828 being out-patients, 343 in-patients, and 19 from Frimley. (This number does not include those in the hospital who were too ill to attend the Throat Department, and were consequently visited in the wards.)

The following is a statement of the diseases of the throat, nose and ear from which they suffered, in many instances the same patient being the subject of more than one of the conditions named.

DISEASES OF THE LARYNX.

Tuberculous disease				 	168
- Laryngitis (non-tuberculous)-	-				
Acute				 	6
Chronic				 	108
Rhinitic				 	6
Nodular				 	1
Hyperplastic				 	1
Subglottie				 	1
Pachydermic				 	6
Specific				 	3
Lupus				 	2
Fibroma of larynx				 	2
Fibroma of vocal cord				 	3
Perichondritis (simple)				 	1
Laryngo-tracheitis				 	5
Epithelioma				 	3
Atrophy of vocal cords				 	1
Paralysis of vocal cord				 	5
Paresis of vocal cord				 	1
Paresis of internal tensors				 	17
Paresis of arytenoid muscles				 	2
Functional aphonia				 	14
Dis	EASES (OF THE P	HARYNX		
Enlarged tonsils (without ade	noids			 	44
,, ,, (with adenoi-					
Chronic tonsillitis				 	10
Sub-acute tonsillitis			'	 	7
Tuberculosis of tonsil				 	3
Lupus of pharynx				 	1
Hereditary syphilis of pharyn	x		·	 	1
Glossitis				 	1
Tertiary syphilis of tongue				 	1
Ulcer of tongue				 	1
Cicatrix of velum				 	1
Carcinoma of pharyn				 	1

Epithelioma of pharynx						1
Chronic pharyngitis						12
Pharyngeal catarrh						1
Sub-acute pharyngitis						1
Elongated uvula						2
Hypertrophic pharyngitis						1
Pharyngomycosis						4
Paræsthesia						26
Hypertrophy of lingual tonsil						6
DISEASES OF	THE N	OSE ANI	NASO-I	PHARYNX		
Adenoids, with enlarged tonsils	s					345
Adenoids, without enlarged tor						23
Naso-pharyngeal catarrh						9
Deviation of septum						160
Perforation of septum						2
Synechiæ						3
Rhinitis:						
Simple chronic						165
Hypertrophic						43
Dry						1
Daniel and			•••			7
A 4 1. : .						7
TT						6
Massl malani						18
Traumatic ulcer of inferior tur	hinal					
Callana et 1						1
						2
Eczema vestibuli nasi			**			1
Depressed nose						1
Anosmia						1
Epistaxis						2
Subjective nasal stenosis						1
Sinuses :—						
Suppuration and catarrl						14
" " "		ntal sinu	1s			1
" " "	of eth	moid	٠			2
Di	ISEASES	OF THE	E EAR.			
Sub-acute catarrh of the midd	le ear					2
Chronic catarrh of the middle	ear					5
Eustachian catarrh						5
Acute suppuration of the midd	lle ear					2
Chronic suppuration of the mi	ddle ear	(in son	ne cases	tubercule	ous)	45
Residua of suppuration of the						9
Tuberculosis of the middle ear						3
External otitis						7
Eczema auris						1
Cerumen						16
Nerve deafness						3
Tinnitus aurium						2

MISCELLANEOUS.

Asthma							 31
Bronchocele							 1
Hypertrophy	of thyroi	id					 2
Inspiratory s	tridor						 1
Neoplasm of	lung						 1
Aneurysm							 2
Epithelioma	of esoph	agus					 1
Enlargement	t of gland	s					 7
Hæmoptysis	(1 probal	bly denta	1)				 2
Papilloma of	f buccal n	nucosa					 1
Leucoplakia	of gums						 1
Dilatation of	f dorsalis	linguæ					 1
Facial tic							 1
Normal uppe	er air pas	sages					 116
				~			
	OPI	ERATIONS	UNDER (JENERAL	ANÆSTE	IESIA.	
Enlarged to	nsils and	adenoids					 297
Submucous			septum				 41
Antra opene			The state of the s	on)			 2
Turbinecton			4.0				 2
Thyrotomy							 1

SIR JAMES DUNDAS-GRANT,

Surgeon-in-Charge of the Throat and Ear Department.

REPORT OF WORK DONE IN THE RADIOGRAPHIC DEPARTMENT DURING 1920.

Since the last report, the work of this department has shown a steady increase. At the conclusion of the war, it was felt necessary that facilities for screen examinations by the physicians should be available daily. Again, the increasing demands upon the staff made further reconstruction necessary, and a part-time assistant to the radiologist has been appointed. This appointment has already proved of the greatest value and, at the present time the work of the department is able to keep pace with the greater demands upon it. In the near future, it is hoped that some further accommodation may be provided, in order that X-ray therapy may be administered; for this there is considerable scope. With regard to the accompanying table, the high-water mark has been reached, and the number of cases examined is more than 50 per cent. higher than in any previous year. About 25 per cent. of the cases in the list have been examined on more than one occasion, chiefly for the purpose of watching the progress of disease and the results of the production of artificial pneumothorax; of the latter cases, there has been an interesting increase, and the cases are affording much useful information.

X-RAY DEPARTMENT. 1920.

Total	numb	er of i	n-patient	ts		 	804
,,	,,	,,	out-pa	tients		 	387
					*		
>>	19	29	cases	**		 	1,191

Affections of Planes malmon and Proget		
Affections of Pleuro-pulmonary Tract:		
Pulmonary tuberculosis		667
Pleural effusion		42
Pneumothorax		145
Bronchiectasis		47
Pneumonia		6
Bronchitis		17
Enlarged bronchial glands		43
Neoplasm (primary or secondary)		29
Foreign bodies in air passage		4
Affections of the Heart or Aorta:		
Acquired or congenital		12
Thoracic aneurysm		21
Position of heart		13
Affections of the Alimentary Tract :-		
Stomach and intestines		11
Œsophagus		5
Affections of the Genito-urinary Tract :-		
Calculus		2
Tuberculosis of kidney		2
Affections of Bones and Joints:		
Injury		5
Disease		42
Other conditions		2
Gunshot Wounds		10
Unclassified		66
	STANLEY	MELVILLE,
March, 1921.	Radiole	ogist to the Hospital.

REPORT ON THE CARDIOGRAPHIC DEPARTMENT FOR 1920.

The Cardiograpic Department was commenced on October 1, 1919, and has since continued under the rules then laid down by the Board of Management. From its inauguration to the end of December, 1920, the out-patients have been seen at 2 p.m. every Wednesday afternoon by me except on two occasions in August while I was taking a short holiday. The total number of cases seen in that period were forty. Several children with severe organic disease were sent, with the assistance of the lady almoner, to schools for the physically defective. Other patients with heart disease not requiring treatment were kept under observation at intervals of about three months, and advised as to suitable occupation, whereas others requiring treatment, attended regularly. In December the fireman of the hospital, who has been a servant of the hospital for eight years, was first seen. He was found to be suffering from pulsus alternans; he was immediately taken off all work and promptly treated, but I regret to state his illness ended fatally about a month later.

The number of cardiac in-patients under my care was approximately thirty. The number of beds allotted, viz., six, was adequate at all times to meet the

demand. In addition, a number of in-patients under the care of my colleagues were seen when required, and a report submitted.

It would add to the efficiency of this department if the cardiac beds were regarded, when necessary, as emergency or special admission beds, as immediate admission is essential for most cardiac cases requiring in-patient treatment.

The electro-cardiograph has been received from the Camb. Sci. Instr. Co. There is no available room for it at present without serious alteration of present accommodation. The purchasing of this instrument was decided upon early in 1914, but postponed owing to the war. Since then the policy of the hospital has somewhat changed, and with 250 beds allotted to the London County Council for pulmonary tuberculosis, it appears highly probable that the number of cardiac in-patients will, as a result, be diminished and not increased. Nevertheless, when suitable accommodation is available the instrument should be installed.

A. HOPE GOSSE, M.D., Director Cardiographic Department.

REPORT BY THE DENTAL SURGEON OF THE WORK IN THE DEPARTMENT FOR THE YEARS 1914-20.

Year	Number of attendances	Anæsthetics given	Scalings	Fillings
1914	 865	 169	 138	 54
1915	 1,400	 467	 500	 136
1916	 1,307	 455	 424	 44
1917	 1,271	 387	 601	 74
1918	 1,054	 349	 383	 81
1919	 1,200	 393	 333	 213
1920	 1,412	 464	 146	 199

These figures show a remarkable increase in 1915, 1,400 attendances against 865 in 1914.

There is a gradual decrease during the war. During this period the patients were frequently in an extremely nervous condition which, combined with the lack of a skilled anæsthetist, rendered satisfactory treatment very difficult.

(Signed) D. H. McDONALD,

Dental Surgeon.

THEATRE CASES FOR 1920.

MR. WARREN.

Scraping sinus (empyema).
Thoracoplasty for empyema.
Appendectomy.
Appendectomy and gall bladder.
Rectal abscess.
Resection of rib (empyema).
Scraping T.B. glands in neck.
Enlarging thoracoplasty sinus.
Scraping T.B. glands in neck.

Thoracoplasty for empyema.
Exploration of chest.
Scraping glands of neck.
Scraping T.B. abscess of leg.
Abscess of lung.
Empyema drainage.
Old empyema, resection of rib.
Exploration of lung.
Empyema, closed drainage.
Laparotomy.

Drainage abscess of lung. Tracheotomy.

SIR JAMES DUNDAS GRANT.

Thyrotomy for epithelium of vocal cord.

MR. ROBERTS.

Thoracotomy and divisions of adhesions.

Excision gland of neck.

Excision T.B. glands of neck.

Cavity in tibia, old gunshot wounds.

Appendectomy.

Rectal abscess.

Ganglion on wrist excised.

Resection of rib (empyema).

Fistula in ano.

Resection of rib (empyema).

Opening up finger.

Fistula in ano.

Resection of ribs (3) (empyema).

Fistula in ano.

Thoracotomy and adhesions.

Amputation of finger (left hand).

Rib resection and drainage.

Excision T.B. glands of neck.

Empyema drainage.

Hernia.

Excision T.B. glands of neck.

Removal tumour of breast.

Amputation breast and glands.

Empyema drainage.

Exploratory thoracotomy.

Resection T.B. rib.

Fistula in ano.

Fistula in ano.

Fistula in ano.

Fistula in ano.

Scraping T.B. abscess of neck.

Thoracotomy and divisions of ad-

hesions.

Incision T.B. abscess of neck.

Exploratory thoracotomy.

Drainage empyema.

Excision glands of neck (L.).

Excision glands of neck (R.).

Drainage pulmonary abscess.

Resection of rib cartilage.

Rib resection empyema and drainage.

Incision and scraping T.B. glands.

Thoracotomy for empyema.

Drainage empyema.

Resection costal cartilage.

Orchidectomy.

Orchidectomy.

Aspiration of chest.

Drainage of lung abscess.

Thoracotomy and washing out empyema.

Glands of neck.

T.B. abscess of thigh.

Drainage empyema.

Partial thoracoplasty.

Removal T.B. glands of neck.

Appendectomy.

Excision T.B. glands of neck.

TOTAL OF CASES.

Sir James Dunda	as Grant	 	 1
Mr. Warren		 	 21
Mr. Roberts		 	 56
		Total	 78







