own experience I can bear out these hopeful conclusions, and I firmly believe that either restoration of the normal physiology or partial gastrectomy is necessary in most cases; the former approaches the ideal, but the latter is sometimes the only practical radical method available.

REFERENCES.
[1] *Annals of Surgery*, 1926, lxxxiv, 271-283. [2] Loc. cit. [3] *Guy's Hospital Reports*, 1921, lxxi, 319. [4] Loc. cit. [5] *Guy's Hospital Reports*, 1924, lxxiv, 70. [6] Ibid., 1922, lxxi, 331; see also *Operations of Surgery*, vol. i, p. 173. [7] Loc. cit.

PROGNOSIS IN PULMONARY TUBERCULOSIS.*

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EVEN in the same community there are enormous differences in the resisting power of individuals attacked by the tubercle bacillus. At the one extreme are those who overcome the bacillus so easily that its presence in them is never suspected during life; at the other are the victims of "galloping consumption," who are very ill when first seen by the doctor, and grow progressively worse until death supervenes. Between these extremes are the majority of consumptives, whose resisting power can be fostered by appropriate treatment.

PATIENTS WITH SMALL RESISTING POWER.

The proportion of cases in county Down in which resistance was very small (1913 to 1924) is shown roughly by the percentage of cases in which death occurred within six months of the date on which each patient was first seen by one of the tuberculosis medical officers.

TABLE I.—*Percentage Dead within Six Months.*

	T.B. +		T.B. −	
	Percentage.	Years of Extremes.	Percentage.	Years of Extremes.
Average	35.0	—	25.7	—
Maximum	43.2	1923	40.5	1918
Minimum	27.0	1913	12.5	1917

If we separate these cases into febrile and afebrile, including among the latter all cases in which the temperature ceased to exceed 99° F. after a week's rest in bed, we get Tables II and III in place of Table I.

TABLE II.—*Febrile Cases. Died within Six Months.*

	T.B. +		T.B. −	
	Percentage.	Years of Extremes.	Percentage.	Years of Extremes.
Average	49.3	—	43.3	—
Maximum	61.5	1922	59.1	1922
Minimum	41.2	1914	25.0	1917

TABLE III.—*Afebrile Cases. Died within Six Months.*

	T.B. +		T.B. −	
	Percentage.	Years of Extremes.	Percentage.	Years of Extremes.
Average	12.8	—	8.1	—
Maximum	22.0	1915	37.0	1918
Minimum	0	1917	0	1915 1917 1922

Since the percentage of rapidly fatal cases found in different years varies so much, we should be chary about coming to a conclusion as to the efficacy of any remedy intended to reduce this percentage, until it has been tried in a large number of cases spread over a considerable number of years.

Almost without exception the patients who died within six months were considered too ill either to be sent to a sanatorium or to be treated at a tuberculosis dispensary. Arrangements were therefore made for domiciliary treatment, the patient being instructed to stay in bed as long as the temperature exceeded 99° F. at any time in the day; to have a room to himself; to admit as much fresh air and sunlight as possible into his room; and to take as much plain nourishing food of various kinds as his stomach would allow.

Where satisfactory home conditions were not available the patient was advised to go into the union infirmary. No special treatment, such as artificial pneumothorax, was tried in any of them. As there is no county sanatorium in county Down, and the sanatoriums to which we sent patients were unwilling to take bad cases, this was the best we could do.

Recent and Non-recent Cases.

In 52 per cent. of our cases (1913 to 1924) the patients had been ill for more than six months before the tuberculosis medical officer was called in, and in 48 per cent. for less. Counting the latter as recent cases, and the former as non-recent, we get the following four tables.

TABLE IV.—*Recent Febrile Cases. Died within Six Months.*

	T.B. +		T.B. −	
	Percentage.	Years of Extremes.	Percentage.	Years of Extremes.
Average	49.8	—	43.4	—
Maximum	63.2	1919	67.2	1922
Minimum	32.2	1916	22.2	1917

TABLE V.—*Non-recent Febrile Cases. Died within Six Months.*

	T.B. +		T.B. −	
	Percentage.	Years of Extremes.	Percentage.	Years of Extremes.
Average	48.6	—	43.0	—
Maximum	64.3	1922	68.8	1923
Minimum	31.2	1913	12.4	1913

TABLE VI.—*Recent Afebrile Cases. Died within Six Months.*

	T.B. +		T.B. −	
	Percentage.	Years of Extremes.	Percentage.	Years of Extremes.
Average	8.8	—	5.0	—
Maximum	27.4	1920	19.8	1918
Minimum	0	1915 1916 1917 1919 1924	0	1915 1917 1919 1922

TABLE VII.—*Non-recent Afebrile Cases. Died within Six Months.*

	T.B. +		T.B. −	
	Percentage.	Years of Extremes.	Percentage.	Years of Extremes.
Average	15.8	—	10.2	—
Maximum	53.4	1915	50.0	1918
Minimum	0	1917	0	1915 1917 1922 1924

* An abridgement of a paper read before the Belfast Division of the British Medical Association.

Taking the average figures from Tables IV, V, VI, and VII as a basis, we can now classify the cases in the order of good prognosis as regards immediate danger as follows:

TABLE VIII.—*Percentage of Patients who Died within Six Months.*

	T.B. −	T.B. +
I. Recent afebrile patients	5.0	8.8
II. Non-recent afebrile ,, ...	10.2	15.8
III. Non-recent febrile ,, ...	43.0	48.6
IV. Recent febrile ,, ...	43.4	49.8

From this table may be seen the wisdom of Professor Moellgaard and Dr. Faber in asking that sanocrysin be used only in afebrile exudative cases. By exudative cases they mean cases in which there has been proliferation of cells rather than formation of fibrous tissue in the affected parts of the lungs. This is the condition to be expected in recent cases. Hence afebrile exudative cases are very much the same as recent afebrile cases. These are the cases in which the best results are to be expected, whatever form of treatment be used.

Extent of Disease as Revealed by Physical Signs.

Up to this point no account has been taken of the extent of the disease in the lungs, as revealed by physical signs. This is an important consideration. At the first examination of each of the patients the case was classified according to the Turban-Gerhardt rules, the symbols T.G. 1, T.G. 2, and T.G. 3 being employed to indicate the extent and severity of physical signs. The effect of a further subdivision of the cases according to this consideration is shown in Table IX.

TABLE IX.—*Percentage of Patients who Died within Six Months; Average of Twelve Years.*

	T.G. 1 and 2.		T.G. 3.	
	T.B. −	T.B. +	T.B. −	T.B. +
Afebrile: Recent	3.2	5.4	8.2	14.5
,, Non-recent ...	5.3	5.3	13.4	20.0
Febrile: Non-recent ...	23.2	26.7	54.0	55.1
,, Recent	33.9	38.0	47.7	54.7

From this table we may calculate the probability that in any particular case of pulmonary tuberculosis death will or will not occur within six months.

Pulse Rate.

The pulse rate is a very important item not yet taken into account. I have not been able to work it in numerically. Most febrile cases can be rendered afebrile by rest in bed if the pulse rate be normal, or not much above normal. If the case be febrile, and the pulse rate 120 or more, the outlook is very grave. The pulse rate, however, may be considerably higher in the presence of the doctor than in his absence. This applies particularly to the first visit. The temperature, too, is similarly affected in some cases.

PATIENTS WITH MODERATE RESISTING POWER.

Let us now consider the after-history of the patients who survived more than six months after they were first seen by one of the tuberculosis medical officers. The number of these was 1,266, of whom 743 had tubercle bacilli in their sputum and 523 had not. There was a very great difference between these two groups, both as regards restoration of working power and mortality. There was also a distinct difference in these two respects in each of these T.B.+ and T.B.− groups, according to the method of treatment.

Three methods of treatment were available: (1) dispensary, where tuberculin was used in all cases, according to what I have called in a previous paper "a rational method"; (2) sanatorium, where tuberculin was used in very few cases, and then only by a rule-of-thumb method; and (3) domiciliary.

No case was classed as treated at dispensary or sanatorium unless at least three months' treatment had been received at one or the other. Patients who received tuberculin treatment from their own doctors under the direction of the tuberculosis medical officer are classed with those treated at the dispensary. To avoid confusion, cases in which three or more months of dispensary treatment was received as well as three or more months of sanatorium treatment are not included in Table X, which illustrates what has just been said.

TABLE X.—*After Ten Years.*

Mode of Treatment.	Percentage at Work after Ten Years.		Percentage Dead after Ten Years.	
	T.B. +	T.B. −	T.B. +	T.B. −
Dispensary	19.2	70.0	72.0	21.0
Sanatorium	11.8	67.0	88.2	33.0
Domiciliary	2.4	44.4	94.1	53.3

No attempt was made to select better cases for dispensary treatment than for sanatorium, nor vice versa. Those who were fit for the one were generally fit for the other, and the choice was left with the patients.

The exclusion of the cases in which death occurred within six months of the time when each patient was first examined by a tuberculosis medical officer left the third group not very different, to begin with, from the other two.

It is noteworthy that even among patients who had tubercle bacilli in their sputum, and who did not receive either dispensary or sanatorium treatment, 2.4 per cent. of those who survived the first six months were at work after ten years. If, therefore, we are shown one or more patients who have done well under some form of treatment, and are asked to believe in consequence that this form of treatment is efficacious, we should hesitate to come to a conclusion until we know what proportion of the patients so treated have done well, and how long they have continued well, separating T.B.+ from T.B.− cases. Among the latter 44.4 per cent. of those who survived the first six months were at work after ten years without any special treatment.

Table XI illustrates the effect on recovery and maintenance of working power of (1) the presence or absence of tubercle bacilli in the sputum; (2) the extent of the disease in the lungs as revealed by physical signs; and (3) the mode of treatment. In this are included all the cases diagnosed as pulmonary tuberculosis in the thirteen years 1913–25, except (1) a few that could not be traced, (2) cases where death occurred within six months from the time when the patient was first examined by a tuberculosis medical officer, and (3) cases in which both dispensary and sanatorium treatment were received for three or more months each.

The figures in the table represent the percentage in each section who were at work in March, 1927. The average time that had elapsed since the patients were first seen was thus eight years.

TABLE XI.—*Patients first seen in years 1913–25. Percentage at Work in March, 1927.*

Mode of Treatment.	T.B. −		T.B. +	
	T.G. 1 and 2.	T.G. 3.	T.G. 1 and 2.	T.G. 3.
Dispensary	82.6	68.9	37.1	9.6
Sanatorium	80.0	41.7	15.5	6.6
Domiciliary	55.0	40.1	11.3	4.4

These figures, as well as those in Table X, confirm me in the opinion that tuberculin, when rightly used, is of distinct service in the treatment of pulmonary tuberculosis.