

possible women and better all-round nurses. Is it not time we were making a big effort to equip our Bengali nurses with a training which will make them capable of filling the posts of responsibility in the hospitals of future India?

PIONEERS OF MEDICINE ¹

Carlo Forlanini

(Born 1847—Died 1918)

'No more hopeful ray of sunshine has ever come to illumine the dark kingdoms of disease than that introduced into the path of the consumptive through the discovery of artificial pneumothorax.' So wrote a great physician in 1917. There was no exaggeration in his words. Thanks to Forlanini's researches thousands of patients, who had been in the last stages of consumption, are to-day leading active and useful lives. The Red Cross, in its world-wide campaign against tuberculosis, owes an enormous debt of gratitude to this pioneer of medicine.

Carlo Forlanini was born in Milan in June 1847. His father had had a distinguished career in medicine. The boy's school career was distinguished by his passion for work and the vivacity of his temperament.

When he left school he hesitated between medicine and engineering as careers. Though he finally chose medicine, his gifts in the realm of mechanics were to stand him in good stead for the rest of his life. It was in fact the engineer in Forlanini that made his work in medicine so fruitful.

Garibaldi's campaign fired the imagination of the young student who wrote in 1866: 'My company of volunteers is highly privileged, for it is in charge of the colours of the regiment'. His ardent patriotism remained a flaming force throughout the rest of his life, and even towards the end of it, when his health was fast failing, the Great War found him a most loyal servant of his country.

Taking the degree of doctor of medicine at Pavia in 1870, Forlanini was attached for a short time in Milan to the service of the oculist, Professor Qualigno, and to a service of venereal disease. In 1877 he began to publish a journal devoted to diseases of the lungs

¹ Supplied by the Secretariat of the League of Red Cross Societies.

and climatic therapy. This marked the beginning of the researches which he was to pursue for the rest of his life.

In 1882 we find him studying the effect of collapse of the lungs on experimental animals. It had long been known that when water formed on a lung, compressing it, the patient's temperature often fell to normal. This was because the water had acted like a splint keeping the lung at rest, just as a wooden splint keeps a fractured limb at rest. Forlanini wondered if this accidental mode of healing a diseased lung might not be copied and modified, and he argued that if air or some other gas could be introduced into the chest so as to keep a diseased lung compressed and at rest, the disease from which it was suffering might be cured. Many of his colleagues considered such treatment far too heroic, almost brutal. For many years Forlanini carried out his researches with little encouragement from others.

Hitherto practically every new remedy for consumption had been applied to early cases. The advocates of these remedies argued :—let us have an early enough case to treat and we will cure it. Now most cases of consumption in the early stage end in recovery, whatever the treatment. Consequently many new systems of treatment, more or less worthless, have been given undue prominence and credit for recoveries. In marked contrast to this attitude was that of Forlanini who proposed to treat only most desperate and otherwise hopeless cases and to cure them.

Although Forlanini's experimental work on animals dated from 1882, it was not until 1888 that he applied his observations to a case of consumption; and it was not until 1894 that he published the results of his first attempts to induce an artificial pneumothorax in a case of pulmonary tuberculosis.

The medical world was quite unimpressed. Forlanini, however, continued to pursue his studies and experiments. In these days of hurried research and premature publication, it is remarkable to find a scientist so hesitant and critical of himself. Forlanini also perceived that were his operation to be forthwith practised wholesale by doctors who had but imperfectly appreciated its importance and mastered its technique, the treatment itself might fall into disrepute.

Forlanini's publication in 1907 of 25 cases of pulmonary tuberculosis treated by artificial pneumothorax again failed to draw much attention. But in the following year Prof. Saugman in Denmark introduced this treatment at his sanatorium and began to achieve wonderful results. The treatment was introduced into France in 1908 and into England in 1910, but all the time it encountered extensive

criticism and scepticism. There were failures and even sudden deaths wherewith this criticism was encouraged; but with improvement in technique, control of the treatment under the X-rays, and a careful choice of suitable cases, the advantages of this system became more and more appreciated. It led to other great advances. It taught doctors the necessity for absolute rest for the lungs, and this teaching came most opportunely at a time when a certain school was advocating hard physical work as a cure for consumption!

In some cases it is impossible to immobilize the lungs by injections of air or gas. In such cases it is now a common practice to remove several ribs and thus to let the lung under them collapse. Yet another operation is the excision of the nerve supplying the muscles of the diaphragm which helps to expand and contract the lung during the respiratory movements. When this nerve is divided, the diaphragm is partially paralyzed and the movements of the lung are much reduced.

These and various other operations have greatly revolutionized the treatment of consumption. Only a couple of decades ago there was little to offer a consumptive in the way of treatment apart from fresh air, rest and good feeding. Now if these simpler remedies fail, there is a wide choice of operative devices from one or more of which the patient may derive great benefit. And it is to the work of Forlanini and his followers that we owe these great benefits.

Forlanini's appointment in 1890 to the chair of clinical medicine at the University of Pavia enabled him to develop his gifts as a teacher and clinician. He never improvised his lectures, but always prepared them most carefully. They were models of logic and clarity. Though his growing reputation gave him many opportunities to enrich himself, he remained devoted to his poor patients and to the arduous path of science. He was elected a senator in 1913, but declining health soon forced him to abandon his work both in the Senate and at the Board of Education, and he had to spend many months by the sea in search of health. He never, however, wholly regained it, and he passed away in 1918.

Previous articles in the PIONEERS OF MEDICINE series were on: Joseph Lister, Paul Ehrlich, William Osler, John Hunter, Oliver Wendell Holmes and Ignaz Philippe Semmelweiss, Claude Bernard, Ambroise Paré, Robert Koch, William Harvey, Pierre and Marie Curie, Hideyo Noguchi, Frederick Grant Banting, William Crawford Gorgas, Clemens von Pirquet, Sir F. Truby King, R.T.H. Laënnec, Emil von Behring, Philippe Pinel, Carl Siegmund Franz Credé, Sir

Aimroth E. Wright, Edward Livingston Trudeau, Gerhard Armauer Hansen, Niels R. Finsen, Louis Pasteur, Sir Patrick Manson, Sir James Mackenzie, Elias Metchnikoff, Hermann M. Biggs, Clarissimus Galen, Alphonse Laveran, Christiaan Eykman, Albert Calmette, Sir Edwin Chadwick, Sir James Young Simpson, Auguste Rollier, the Chamberlen Family, Walter Reed, Sir William Boog Leishman, Shibasaburo Kitasato, Lee K. Frankel, Eugene Lyman Fisk, Wilhelm Conrad Roentgen, Jean Martin Charcot, Sir Ronald Ross, Siegmund Freud, Moses Edward Jenner.

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THE INTERNATIONAL COUNCIL OF NURSES

Preliminary Programme

Congress Paris-Brussels, July 10th to 15th, 1933

Meeting of the *Board of Directors* of the I. C. N.—July 4th to 6th.

Meeting of the *Grand Council* of the I. C. N.—July 7th to 8th.

The method of *Registration for the Congress* is as follows:

(1) Those desiring to attend the Congress who come from the 23 countries in which the I.C.N. has member organisations must register through the headquarters of the national nurses' association in their country. The 23 countries are as follows: Belgium, Brazil, Bulgaria, Canada, China, Cuba, Denmark, Finland, France, Germany, Great Britain, Greece, Holland, India, Irish Free State, New Zealand, Norway, Philippines, Poland, South Africa, Sweden, U.S.A., Yugoslavia.

(2) Those coming from other countries must register through the headquarters of the International Council of Nurses, 14, Quai des Vaux Vives, Geneva, Switzerland.

The *Registration Fee* is—

50 French francs, plus 25 French francs if the report of the proceedings of the Congress is desired.

The *Official Languages of the Congress* are—

English, French and German. The programme and the main papers of the Congress will be printed in these languages. At meetings involving discussions, translations will be undertaken.

Regulations for Section Meetings—

Main papers read at a Section Meeting shall not exceed 15 minutes. The *Speaker opening the discussion* is allowed 10 minutes; speeches *from the floor* shall not exceed 5 minutes each apart from their translations.

No Exhibition will be arranged.

Luncheons—

A great number of luncheons for nurses with common interests and work will be arranged and announced with the *Final Programme*.

CONGRESS OF THE INTERNATIONAL COUNCIL OF NURSES.

Paris—July 10th to 12th.

Brussels—July 13th to 15th.

Reception—Sunday evening, July 9th.