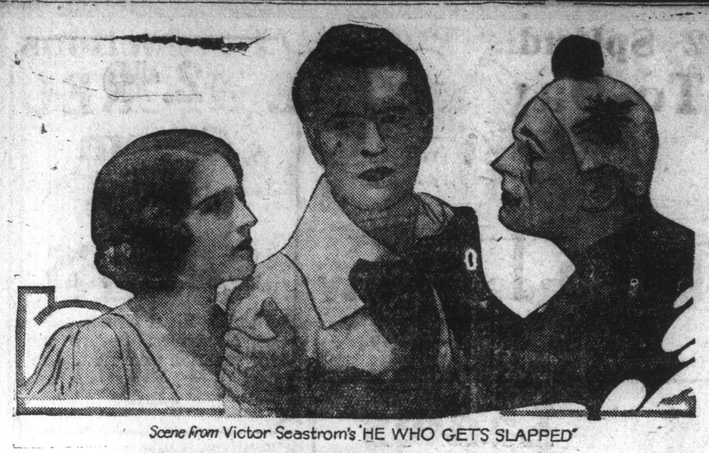

Scene from Victor Seastrom's HE WHO GETS SLAPPED"

The above is a scene from the biggest screen success that has reached here in many months. Lon Chaney has never appeared to better advantage than in "He Who Gets Slapped" which is coming to the Nickel on Monday. Its the biggest thing in big pictures.

"The Diagnosis of Tuberculosis"

ADDRESS DELIVERED TO NFLD. MEDICAL ASSOCIATION BY DR. E. E. MILLER.

To-day I am to talk to you on the "Diagnosis of Tuberculosis." The subject is a broad one and with the time at my disposal I can only touch upon some of the essential points that may be of value to you.

No one can deny the need of perfecting our skill in the early recognition of tuberculosis. One has but to notice the number of deaths from phthisis in Newfoundland and to reckon, as recent statistics and health surveys have shown, that for every death from Tuberculosis reported in a community, five to nine active cases of the disease are to be found requiring treatment, to conclude that in your province there are probably some 3,000 or 4,000 cases of tuberculosis which should be under observation, whereas there are actually under treatment in your sanatorium at St. John's less than 125.

This is proven to be well within a correct estimate, when we find that in other places where a thorough health survey has been made 1 per cent. of the population had active tuberculosis disease, requiring treatment, and another 1 per cent. had the disease in a latent or arrested form. The population of Newfoundland and Labrador, if I remember correctly, is about 263,000, which would give us, at the rate of one in a hundred, about 2,600 patients who should be under observation and probably 2,600 more who, though not requiring treatment, should be warned regarding the necessary measures to prevent the development of their tuberculous infection.

What can we do to cope with this problem? The best practical test ever made, so far as I know, is the world-famous Framingham Public Health demonstration. I may explain, as many of you probably know, that the National Tuberculosis Association of the United States, with a grant of $100,000 from the Metropolitan Life Insurance Company, as an experiment and demonstration of what can be accomplished by the best means, made an effort to reduce the tuberculosis morbidity and mortality rate in a chosen town, Framingham, Massachusetts. In 1916 in that city the death rate from tuberculosis was 121 per 100,000 of the population. In 1921 the rate had been reduced to 40 per 100,000, that is, a reduction in 5 years of 67 per cent.

Dr. D. B. Armstrong, leader of the Framingham Public Health demonstration in the United States, in one of his published monographs states: "The expert medical consultation service, developed subsequent to the first 'drive', and carried on in connection with the routine medical examination work of the Community Health Station, has constituted, next to the drives themselves, the greatest source of information regarding tuberculosis cases in Framingham, and has been chiefly responsible for the bringing under control of the active tuberculosis patient. This consultation service is at the disposal of physicians or private citizens on all doubtful pulmonary conditions, and has proved to be so valuable an instrument in the discovery of the disease in Framingham that there is a strong likelihood at present of its extension, on a permanent and statewide basis, under the auspices af the State organizations. In other words, Framingham found that the services of expert, specially trained chest examiners, did more than any other factor in the whole campaign to bring under control the cases of tuberculosis in that city.

Services such as this is certainly one of the things required in Newfoundland; that is to say, you need to provide in each district a chest clinic which will be visited at regular intervals by a physician specially trained in respiratory diseases, including tuberculosis, whose services shall be at the disposal of physicians who desire to bring to him for examination and advice any case of respiratory disease, especially those in which tuberculosis is suspected. My experience both at Kentville, and at the various public health clinics I have attended throughout the province of Nova Scotia, leads me to believe that the medical training we have received in the past has not been as thorough and carefully worked out as it should have been, with the result that many a physician to-day is uncertain in his diagnosis of tuberculosis disease even when it is manifest in the lungs. I have great sympathy for the general practitioner in the many problems he is up against in private practice. We at the sanatorium, with all our facilities, realize as well as any one how difficult at times it is to make a satisfactory diagnosis. A single examination so often does not settle the question, and unless one can secure further information such as may be given by careful roentgenological and laboratory reports, it is practically impossible to state with certainty the ailment from which the patient is suffering. There is excuse, I may say, for not recognizing suspicious and early tuberculosis conditions where the symptomatology is not clear; but in cases in which the physical signs are clearly defined in the lungs, no physician should fall down in his diagnosis.

During the past two years we have made an exhaustive study, clinical and X-ray, of some 1200 cases admitted to the Nova Scotia Sanatorium since 1914; and our findings, presented before the American Climatological Association, have been published in various journals. I hope to-day some of the points we have learned from our study will prove of interest and help to you.

The standard of our examinations includes a careful history of the illness of the patient; a complete physical examination; nose, throat and dental examinations; laboratory examinations, including sputum analysis and blood examinations; X-ray examinations (flouroscopic and stereoscopic), and finally the correlation of all these findings at our medical meetings so that a diagnosis may be established.

The patients that present themselves for examination may usually be divided into 4 groups: (1) Not Tuberculous. (2) Suspected Tuberculosis. (3) The Tuberculous. (4) Non Pulmonary Tuberculosis.

As I am not going into any discussion of forms of tuberculosis other than pulmonary, I will dismiss this fourth group now. It includes patients suffering from tuberculous adonitis, epididymitis, peritonitis, tuberculosis of the bones, joints, etc.

1. The Not Tuberculous: These often give us a great deal of trouble in diagnosis and take some time to decide, because the symptoms, in many cases, so very closely resemble those of tuberculosis. They may roughly be divided into three general classes—(a) patients with symptoms resembling those of tuberculosis. Those, for example, suffering from focal infections such as diseased nasal and sinus condition, infected tonsils, teeth, etc. These patients complain of cough, expectoration, blood-streaked sputum, or even some clear blood; they may have slight hoarseness and shortness of breath. A careful examination of the upper respiratory tract and the fact that the patient is losing little or no weight or strength, should make us feel that we are dealing with some condition other than tuberculosis.

(b) We have also in this group patients suffering from chronic pulmonary diseases such as chronic bronchitis, asthma, bronchiectasis, pneumonokoniosis, unresolved bronchopneumonia. The history of these patients points to a disease extending over a long period of time. Usually they complain of cough, expectoration, shortness of breath, loss of strength, slight fever, little or no loss of appetite, nor loss of weight. The physical signs, rales and rhonchi, however, are generally basal and not in the upper third of the lung, where we usually find tuberculous disease. Sputum is persistently negative for tubercle bacilli. The X-ray examination corroborates the physical findings and indicates that we are dealing with a non-tuberculous respiratory affection.

(c) Then there are patients suffering from anemia, chlorosis, athenia, or affections localized in the intestines, gall bladder, appendix, kidney, etc., who run a slight fever and complain of loss of strength and appetite. The misleading symptoms here are usually obscure fever and loss of strength. A careful history and physical examination are usually sufficient to establish a diagnosis in these cases.

In the second of our main group, Suspected Tuberculosis, we place those whose symptoms are still more suspicious. In this group the physical and X-ray findings are often most suspicious but not clear-cut. Tubercle bacilli are not to be found in the sputum. The history of the onset of the disease, however, is usually suggestive, particularly when the patient gives a history of an hemoptysis or pleurisy with effusion. Anyone who gives a history either of hemoptysis or wet pleurisy should be considered tuberculous until the contrary is proved.

2. The Tuberculous: This group we divide into two sections (a) Clinical tuberculosis (non-bacillary) and (b) Positive tuberculosis (bacillary).

In (a) we place those cases in which our diagnosis is founded upon clinical evidence alone, that is, upon a positive history and physical findings in the lungs, where tubercle bacilli have not been found in the secretion.

In (b) are those who, in addition to the clinical findings, have tubercle bacilli in their sputum. This division is really between bacillary and non-bacillary cases of tuberculosis. This entire Third Group, the Tuberculous, is divided, for diagnostic purposes, into the familiar classification, (1) Incipient, or as the more approved term has it, Minimal; (2) Moderately Advanced; (3) Far Advanced.

CLASSIFICATION OF TUBERCULOSIS. . . . . .

Lesions.

Incipient: Slight infiltration in the apex of one or both lungs or a small part of one lobe. No tuberculous complications.

Moderately Advanced: Marked infiltration more extensive than under incipient with little or no evidence of cavity formation. No serious tuberculous complications.

Far Advanced: Extensive localized infiltration or consolidation in one or more lobes. Or disseminated areas or cavity formation. Or serious tuberculous complications.

Symptoms.

A.—(Slight or None). Slight or no constitutional symptoms, including particularly gastric or intestinal disturbance, or rapid loss of weight, slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent.

Far Advanced.—Extensive localized infiltration or consolidation in one or more lobes. Or disseminated areas or serious tuberculous complications.

B. (Moderate). No marked impairment of function, either local or constitutional.

C. (Severe). Marked impairment of function, local and constitutional.

X-RAY.

(1) Minimal: X-ray findings to show a total area involved (parenchymatous) not greater than the area to the upper level of the 2nd chondrosternal junction on one side (both sides may be involved) in the form of scattered mottling, or an intense shadow interpreted as pleuritic.

(2) Moderately Advanced: The X-ray to show an intense shadow, not interpreted as pleuritic, of no greater extent than the area above the upper level of the 4th chondro-sternal junction on one side; or areas of rarefaction interpreted as cavities limited to one interspace; or scattered mottling over a greater area than that under "minimal" but not greater than the area of one entire lung and to the level of the 2nd chondro-sternal junction on the opposite side.

(3) Far Advanced: The X-ray to show an intense shadow, not interpreted as pleuritic, of greater extent than the area above the upper level of the fourth chondro-sternal junction of one side, or areas of rarefaction interpreted as cavities, greater than one interspace, or scattered mottling greater in extent than under "moderately advanced". When I come to my X-ray films I shall show you typical pictures of these three different stages.

Now let me speak of some of the means which in general practice one may use to arrive at a diagnosis.

First as to the "history findings". I fear that sufficient importance is not given to an accurate and complete history of the patient. On going over our records I see that a diagnosis of tuberculosis might have been made from the history findings alone in at least 75 per cent. of the cases. Dr. D. A. Stewart, a well-known Canadian tuberculosis specialist, states: "If a choice had to be made from one element only in the diagnosis the choice would not be physical examination, not X-ray plates, nor laboratory tests, but history. Perhaps the pen is mightier even than the stethescope."

The ordinary symptoms are well-known—Loss of strength, weight and appetite; cough and expectoration, slight fever, hoarseness, and in some cases, night sweats—two or more of these, existing for more than six weeks, should be considered suggestive of tuberculosis, and should prompt a careful examination and enquiry into their cause. As for hemoptysis and pleurisy with effusion, these are cardinal or deciding symptoms of tuberculosis and I speak of them in some detail.

(Continued on page 13.)