Introduction

The study-group held four sessions between 7 and 9 May 1953. The number of delegates varied from 40 to 60, and a large number actively participated. Observers from three non-governmental health organizations were also present. Eighteen governments had transmitted documents on tuberculosis control in preparation for the technical discussions.

The nominations made at the third plenary session of the Assembly were unanimously approved, and the group elected Sir John CHARLES (United Kingdom) as Chairman and Dr. C.L. GONZALEZ (Venezuela) as Rapporteur. Owing to the rather large number of participants, the Chairman suggested that the group should be divided and that Dr. G.D.W. CAMERON (Canada) and Dr. R. VISwanathan (India) should act as Chairman and Rapporteur, respectively, of the second group. The two groups agreed to follow the same agenda and the same times of discussion; but, in fact, the two groups were separated for the first meeting only.

A summary of the views expressed during the discussions follows.

General considerations

Definition

From the point of view of the health administrator, tuberculosis must be considered an infectious disease caused by a specific agent, and the control programme should be planned on that basis.
Aids to definition

For the administrator, the essential factor in defining a case is the demonstration of tubercle bacilli. The diagnostic procedure may be very refined or not, depending on the facilities available in a given area.

Relative importance of pulmonary and non-pulmonary tuberculosis

The group considered that, from the public-health point of view, non-pulmonary tuberculosis was relatively less important than pulmonary tuberculosis. Therefore, the methods of controlling the disease should be based on the epidemiological characteristics of its pulmonary form.

Sources of infection

The extra-human sources of infection were considered to be of relatively minor importance. With one or two exceptions, it was agreed that the importance of bovine tuberculosis varied in different countries and was inconsiderable.

Health Techniques for Ascertaining the Problem

There was considerable discussion on the question of the methods to be adopted for obtaining epidemiological information. The need for standardized methods of examination and classification of the information thus obtained was pointed out.

There are three types of methods of examination which can be utilized:

(a) tuberculin testing;

(b) search for presence of tubercle bacilli;

(c) X-ray examination.

In each of these methods, techniques should be standardized as far as possible. Thus, in tuberculin testing, the same material and criteria of reading should be used; in X-ray examination, the same method of reading and recording films, etc.

It was generally agreed that in certain countries tuberculin testing was useful for obtaining an estimate of the incidence of tuberculosis infection, and a general idea of the prevalence of the disease. For establishing reliable figures of
tuberculosis morbidity, the demonstration of tubercle bacilli should be primarily depended upon. Surveys by mass X-ray alone will give little, and sometimes even misleading, information, especially in areas with high prevalence of pulmonary disease showing radiological findings similar to those of tuberculosis.

Random representative surveys will, no doubt, give the necessary information for planning a tuberculosis-control programme in most countries. Attention was called to the danger of drawing general conclusions from the results of examination of selected groups.

A warning was given against relying only upon epidemiological data obtained from surveys - not only prevalence but incidence should be ascertained, if possible, through the routine work of chest clinics.

Health Techniques for Preventing Spread of Infection

Under the sub-heading of "special techniques", the following aspects were considered.

Case-finding

Opinions were expressed on the administrative problems raised by the mass X-ray case-finding programmes in countries where there is a lack of personnel, laboratory and other facilities, and a shortage of beds.

In general, the group agreed with the view expressed by the Expert Committee on Tuberculosis at its fourth session when it stated:

"... mass radiography should not be employed where there are few or no facilities, such as laboratory and dispensary services, for the exact diagnosis and supervision of patients. In other words, it is of little value simply to take thousands of X-ray films of the lungs of people and then to do nothing more about the matter."*  

It was pointed out that mass radiography is not always an inexpensive procedure. Attention was called to the possible danger of mistaken diagnosis based on X-ray alone, with the further risk of unnecessary treatment.

Some participants called the attention of the group to the importance in case-finding programmes of private physicians as a supplement to the work of chest clinics.

hole of the anti-tuberculosis dispensary

The Chairman made some comments on the evolution of the dispensaries since the days of Sir Robert Philip in Edinburgh. He recalled that such services moved from isolated into integrated public-health programmes, and he suggested that the name should be changed from "anti-tuberculosis dispensary" to that of "chest clinic", in view of the fact that they were dealing more and more with cases of chest disease and not just with cases of tuberculosis. Other participants were of the opinion that the name should be changed for psychological reasons, thus avoiding the use of the word "tuberculosis".

The function of the chest clinic was discussed, and it was stated that, even though the function may vary from place to place, in general it should comprise the following:

(a) detection of cases as early as possible;
(b) examination and follow-up of contacts;
(c) supervision of isolation at home;
(d) supervision and after-care of patients;
(e) ambulatory treatment where necessary;
(f) education of the public, especially in regard to the prevention of tuberculosis.

One of the participants emphasized the need for mobile dispensaries, in order to be able to go to the people, instead of waiting for them to come to the clinics.

Isolation of infectious cases

There was, of course, general agreement that institutional isolation of infectious cases was the most effective type of isolation, both from the point of view of the individual patient (treatment) and of the community (prevention). But the provision of the requisite number of institutional beds for tuberculosis patients meets with two main difficulties: the high cost of construction and maintenance of such institutions,
and the lack of trained personnel. It is therefore necessary, in many countries, to rely mainly on home isolation.

Attention was drawn to the rather important role general hospitals should play in the isolation and treatment of tuberculous patients. In some countries, arrangements had been made to assign a certain percentage of beds in general hospitals for such patients.

It was emphasized that it was not necessary to establish elaborate institutions, and that preference should be given to inexpensive hospital buildings.

It was also stressed that, in tropical and sub-tropical countries, isolation during the night was particularly important.

**Handling and disposal of infectious material**

It was emphasized that, as sputum is the main source of infection, it should be properly disposed of as quickly as possible. The first task of the health visitor or nurse should therefore be to teach the proper handling and disposal of infectious material. This teaching gives much better results when given in the patient's home than when given in the dispensary.

The power of sunlight to destroy tubercle bacilli was stressed, and it was suggested that this might be used in tropical regions as a means of rendering sputum non-infectious.

This aspect of tuberculosis prophylaxis should be considered part of an educational programme.

**Measures for protecting children**

It was generally agreed that BCG vaccination is probably the best method of protecting children, particularly the new-born, from tuberculosis. In countries financially well placed, however, the question of isolating new-born children from tuberculous parents, either in special institutions or by handing them over to foster mothers, may be considered.
Vaccination against Tuberculosis

The group was in agreement with the recommendations of the WHO Expert Committee on Tuberculosis in regard to the scope, extent, and applicability of BCG vaccination. In population groups with high tuberculous infection and mortality, BCG vaccination on a mass scale will be beneficial. Even in countries with low mortality rates, vaccination can be used for protecting individuals and groups who are exposed to tuberculosis.

Some proposals were made as to how BCG programmes could best be integrated into general public-health activities.

The different methods of BCG vaccination and the keeping properties of fresh and of freeze-dried vaccine were discussed.

The group, however, was informed that these problems, being of great technical importance, would be discussed at the next meeting of the Expert Committee on Tuberculosis, to be held at the end of 1953.

General Measures and Procedures

Health education

It was realized that certain erroneous ideas about tuberculosis are still prevalent even among otherwise well-informed and educated groups of people in almost all countries of the world. Education of the public concerning the disease was therefore essential for the success of any tuberculosis-control programme. The group was of the opinion that all available means should be utilized for this purpose, and that an effort should be made to reach all age-groups. The role of the public-health nurse in this work was particularly stressed. It was also felt that, in those countries where the control programme had just been initiated, health education in the field of tuberculosis should be undertaken separately in order to give it adequate emphasis. On the other hand, in countries where the programme was well under way, health education in the field of tuberculosis should form part of general public-health education programmes. The group also took note of the suggestion that health education should be intimately associated with every stage of the tuberculosis-control programme.
Role of voluntary agencies

Representatives of the International Union against Tuberculosis and the League of Red Cross Societies gave accounts of the work and aims of these agencies. The general feeling was that the voluntary agencies in some countries are a great help in initiating programmes and in tackling such subjects as health education and social assistance. These organizations should be considered as ancillary to, and not as substitutes for, government action.

Legal measures

The point most emphasized in this connexion was that legislative measures cannot achieve the desired results without proper educational preparation of the people concerned. Compulsory hospitalization of tuberculous patients was discussed, and the general view of the group was that legislation in the field of tuberculosis control will not play an important role. In most of the countries where laws for compulsory hospitalization and notification exist, their enforcement has been found to be difficult. The group was of the opinion that better results could be achieved by intensive health education rather than through legislation. However, certain laws, no doubt, should exist in order to deal with inconvenient and difficult situations.

With reference to the question of migrants, the legislation in the different countries varies a great deal. Some countries have regulations to avoid the entrance of "open" cases; some others prohibit the entrance of people with any pulmonary shadow. This difference in regulations suggests the desirability of some agreement on "what is a case of tuberculosis" for the purpose of restricting entrance to any country.

Curative Measures

Different views were expressed about the relative importance of different curative measures in the field of tuberculosis control. It was generally held that indiscriminate use of the newer drugs for the treatment of tuberculosis should not be allowed. Suitable regulations could be adopted for this purpose. The group felt that, as the evaluation of different therapeutic measures requires expert knowledge, the matter could be more appropriately considered by a committee of experts.
Rehabilitation and the prevention of relapse

The group felt that the prevention of relapse was associated, to a certain extent, with suitable rehabilitation of patients during their convalescence. After-care colonies, established preferably in association with tuberculosis hospital and sanatoria, are one of the best means for rehabilitation of ex-tuberculous patients.

Closely related to rehabilitation is the question of resettlement. The ex-patients should be provided with suitable employment in order that they may be able to earn their livelihood. Some sort of insurance scheme can be adopted in most countries for the purpose of making financial provision to the family during the period of illness of the patient and to himself, if need be, in case of unemployment.

Summary

The public-health administrator should consider tuberculosis first of all as an infectious disease, not merely a social disease influenced by the general standard of living.

As human cases of tuberculosis are the main sources of infection, and as in man the extra-pulmonary forms play a minor role, emphasis should be placed on finding the pulmonary form of tuberculosis.

Since the infectious cases are of primary interest in the tuberculosis-control programme, the labelling of cases should be based on demonstration of tubercle bacilli and not merely on interpretation of a chest X-ray.

The need for reliable epidemiological data for planning and evaluating a programme is emphasized.

The tuberculosis dispensary, or, better termed, the "chest clinic", should be the centre for all aspects of tuberculosis control.

Emphasis should be placed on prevention; but this should, wherever possible, be combined with some sort of treatment. Mass BCG-vaccination is considered a useful tool, especially in countries with high prevalence of tuberculosis. Isolation of infectious cases, especially at night, is of greatest importance, and such isolation can be
obtained not only in institutions, but also by other means, in or near the patient's home.

Every tuberculosis-control programme should be intimately connected with an educational programme, which - like the rest of the tuberculosis programme - should be integrated at the earliest possible stage into the general public-health programme of the country.