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**EXPERT COMMITTEE
ON TRACHOMA**

First Report

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EXPERT COMMITTEE ON TRACHOMA

First Session

Geneva, 3-8 March 1952

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- Dr. A. F. El Tobgy Bey, Professor of Ophthalmology, Fouad I University, Cairo, Egypt
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- Dr. Y. Mitsui, Assistant Professor of Ophthalmology, Kumamoto University Medical School, Kumamoto, Japan (*Vice-Chairman*)
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- Miss H. Martikainen, Chief, Health Education of the Public Section, WHO
- Dr. L. H. Murray, Chief, International Quarantine Section, WHO
- Dr. J. Vesely, Chief, Fellowships Section, WHO

The report on the first session of this committee was originally issued in mimeographed form as document WHO/Trachoma/32, 8 March 1952.

EXPERT COMMITTEE ON TRACHOMA

First Report¹

The Expert Committee on Trachoma held its first session in Geneva from 3 to 8 March 1952.²

In the absence of Dr. Brock Chisholm, Director-General of the World Health Organization, the session was opened by Dr. P. Dorolle, Acting Director-General, who outlined the administrative procedures which had led to the setting-up of the committee and to the definition of its terms of reference.

Professor G. B. Bietti and Professors P. Thygeson and Y. Mitsui were unanimously elected Chairman and Vice-Chairmen respectively. Dr. H. Moutinho and Professor P. Thygeson were appointed Rapporteurs.

The agenda presented by the Director-General was approved and adopted.

Terms of Reference

The committee noted that by its terms of reference, as defined by the Third and Fourth World Health Assemblies, it was directed "to study the problem of trachoma with a view to submitting practical recommendations" as to "the possibility of successfully eradicating it by the application of modern methods of control",³ and, bearing in mind that "in a great number of countries trachoma and other related ophthalmias constitute an urgent health problem", to recommend "effective preventive measures against these diseases" on an international level.⁴

¹ The Executive Board, at its tenth session, adopted the following resolution:

The Executive Board

1. NOTES the first report of the Expert Committee on Trachoma;
2. THANKS the members of the committee for their work;
3. RECOGNIZES that at the present time there are no international regulations dealing with the control of trachoma in international traffic;
4. DECIDES to refer this report to the Committee on International Quarantine for its consideration, from the practical point of view, of section 3, dealing with "Prophylaxis of trachoma in international traffic";
5. AUTHORIZES publication of the report.

(Resolution EB10.R15, *Off. Rec. World Hlth Org.* 43, 5)

² The session was preceded by a meeting of the Joint OIHP/WHO Study-Group on Trachoma, held at the Office International d'Hygiène Publique, Paris, in October 1948 (see *Off. Rec. World Hlth Org.* 19, 27).

³ Resolution WHA3.22, *Off. Rec. World Hlth Org.* 28, 23

⁴ Resolution WHA4.29, *Off. Rec. World Hlth Org.* 35, 27

1. Chemotherapy of Trachoma

1.1 Introduction

1.1.1 The Expert Committee on Trachoma, basing its conclusions on the personal experience of its members, on the results of studies undertaken during the past 18 months under the aegis of WHO, and on the treatment of several thousands of patients, is of the opinion that the majority of cases of trachoma can be cured by chemotherapy and antibiotic therapy. The clinical forms of the disease, both acute and chronic, are very varied. Nevertheless, the therapeutic methods described below make it possible to treat this disease with every chance of success. These methods have, moreover, the advantage of acting effectively on other inclusion conjunctivitis as well as on associated infections and epidemic conjunctivitis.

1.1.2 The committee recognizes that at the present stage of knowledge the most effective treatment for trachoma is the simultaneous use of certain antibiotics with sulfonamides, the former being administered locally, and the latter orally.

1.1.3 Such mixed treatment calls for the frequent application (every 2 or 3 hours) of antibiotics to the conjunctival sac and for the daily administration of 40-50 mg of sulfonamides per kg of body-weight, divided into two to (preferably) four doses.

1.1.4 Antibiotics

1.1.4.1 Aureomycin and terramycin are considered particularly active on the causal agent of the disease, and it has been recognized that these two antibiotics also act on most of the above-mentioned conditions.

1.1.4.2 For reasons of convenience in application, to ensure adequate diffusion in the conjunctival sac, for the sake of economy, and to ensure the use of a stable product these antibiotics must be applied locally, preferably in the form of a 1% (minimum) ointment.⁵ Systemic administration is not to be recommended.

1.1.4.3 In particular cases (superimposed acute conjunctivitis, secondary bacterial infections) the association of other therapeutic agents may be considered.

1.1.5 Sulfonamides

The committee recognizes that the sulfonamides are active against trachoma. Nevertheless, in view of their toxic properties and the variations

⁵ Present solutions are unstable.

of tolerance from one person to another, it is advisable to use the least toxic products: e.g., potassium and sodium salt of *p*-sulfonamido-phenyl-azosalicylic acid, sulfacetamide, polysulfonamide mixtures, dimethyl-sulfanilamido-isoxazole, etc. These are best given orally.

1.2 Mass treatment of uncomplicated trachoma

1.2.1 In view of the disadvantages in the use of sulfonamides mentioned above and the relatively high cost of long-term treatment with these products, the committee is of the opinion that in mass therapy their use should be confined to cases which prove resistant to antibiotics.

1.2.2 *Scheme for mass treatment*

1.2.2.1 Omitting the acute forms of trachoma and its corneal complications of a vascular, infiltrating, or ulcerating type, for which short-term treatment is generally sufficient, and excepting cases where, because of local circumstances or for economic reasons, the mixed treatment described above (see section 1.1.3) cannot be applied, the minimum therapy of which details are given below may be administered with every hope of obtaining a large percentage of cures:

(a) Application of aureomycin or terramycin 1% ointment four times daily without interruption for a period of two months.

(b) Evaluation of results and selection of resistant cases.

(c) For the resistant cases only, institution of the mixed treatment, local treatment being continued without interruption but with the addition of one of the above-mentioned sulfonamides given orally in a dose of 40-50 mg per kg of body-weight daily. This dose must be administered in at least two parts and must be adjusted with respect to the number of daily administrations: the larger the number the smaller the dosage. The doses should be spaced out as regularly as possible over the 24 hours and should be continued for three consecutive weeks. The usual precautions should be taken to detect reactions among those under treatment.

(d) Depending on the change in the clinical picture, and in the absence of cure, a second and even a third course of sulfonamide treatment similar to the first should be given, with an interval of ten days between each course.

1.2.2.2 Every endeavour should be made to continue the local application of antibiotics throughout the whole period of sulfonamide treatment, including the intervals.

1.3 Surgery and chemical desquamatives

1.3.1 The committee considers that as more and more effective medical treatment of trachoma becomes available to ophthalmologists, mechanical adjuncts will become less and less necessary. Nevertheless, in certain cases, very gentle and non-traumatizing expression of soft follicles which have a tendency to open spontaneously is permissible, as is also the painting of the conjunctiva with slightly caustic solutions (e.g., 1% or 2% silver nitrate, copper sulfate, etc.), or the instillation of such solutions into the conjunctival sac.

1.3.2 These measures must now be considered as complementary to purely medical treatment and as no longer needed except in a limited number of cases in which they may accelerate cure. In any case, they call for particular conditions (the existence of adequate equipment, sufficient medical personnel, etc.), and in mass treatment they may be dispensed with without any appreciable disadvantage.

1.3.3 Naturally, other methods of treatment (surgery, etc.) are still needed for the cicatricial sequelae of trachoma (trichiasis, entropion, corneal leukoma, etc.).

2. Methods of Trachoma Control Applicable in Underdeveloped Countries

2.1 Basic principles

2.1.1 Any programme for trachoma control must be directed not only against the disease itself but also against related and associated conditions and against epidemic conjunctivitis. In this section of the report, therefore, the term "trachoma" will refer to these eye diseases as a whole.

2.1.2 The basic principles of trachoma control include :

- (a) case-finding and treatment of patients ;
- (b) rational health education of the people, adapted to their particular conditions ;
- (c) destruction of possible vector agents, and other environmental sanitation measures.

2.1.3 All such action has a prophylactic value.

2.1.4 The cost of trachoma control is relatively low since, in spite of the large number of staff required, the price of the necessary drugs is moderate. From the point of view of the community, the cost is very

rapidly more than compensated by the considerable economic value of the restoration to health of the workers.⁶

2.2 General organization

The committee considers that action against trachoma should include the following three elements :

- (1) appropriate legislation ;
- (2) health education of the people ;
- (3) specialized control.

2.2.1 Legislation

Legislation should be adapted to the economic, social, cultural, and administrative development of the country, and should provide a legal basis for the organization of trachoma control in its various forms.

2.2.2 Health education of the people

2.2.2.1 The committee considers that health education is of primary importance in the prophylaxis of the disease, and that it should be developed to the greatest possible extent by all available means and by modern propaganda techniques adapted to local conditions. The interest of school-teachers should be aroused and their close collaboration obtained. The aim should be to develop a sense of collective and individual responsibility with regard to trachoma control.

2.2.2.2 Teaching should emphasize the dangers and serious consequences—individual and familial, social and national—of the disease ; it should encourage the patient to obtain treatment for himself and for his family by pointing out that such treatment is both available and effective.

2.2.3 Organization of specialized control

2.2.3.1 The committee considers that for the control of trachoma to be effective, the existence of a permanent network of fixed and mobile centres, distributed over the whole of the territory in which trachoma is endemic, is desirable.

2.2.3.2 This network should be under the technical direction of a central organization, an institute of trachoma and eye diseases, which should act as the co-ordinating body, and as a centre for study, scientific research, and teaching ; it should provide facilities for consultation, treatment, and hospitalization.

⁶ In Tunisia, for example, a country of 3,500,000 inhabitants, about 25,000,000 working days per year are lost through trachoma and other eye diseases.

2.2.3.3 The network of local centres should include, in built-up areas, hospital services and specialized or general dispensaries according to local needs; in rural areas, specially equipped mobile units will be needed.

2.2.3.4 Hospital establishments and ophthalmological dispensaries must be under the control of medical personnel with adequate ophthalmological training. In addition to medical personnel in the narrow sense, nursing personnel (male and female nurses, visiting nurses, social workers, etc.) should be used to the fullest possible extent. They should have received ophthalmological training, adapted to their duties, in addition to their general training. Male and female teachers with an elementary but practical training in ophthalmology should also be employed. In fact, anyone with sufficient education and having received elementary training in ophthalmology could make a useful contribution to the campaign.

2.2.3.5 The network of centres for the control of trachoma and other eye diseases should be developed progressively, in the first instance covering effectively a selected region. The region should then be extended gradually as facilities permit. In the establishment of the network, both in the initial region and in the regions to which the services will gradually extend, it will be advisable to make the fullest possible use of existing institutions and of their possibilities for adaptation and development.

2.2.3.6 The ophthalmological services should be developed in complete co-ordination and co-operation with the other public-health services, in order to make it possible for the ophthalmological services to be adapted to other uses in the event of favourable developments with regard to the endemicity of eye diseases.

2.3 Large-scale control projects

2.3.1 The committee recognizes the effectiveness of large-scale projects for the control of trachoma and other infectious eye-diseases when the incidence is high. These projects may be undertaken without the previous existence of a complete network of ophthalmological centres, but will be more completely effective when supported by an organization of the kind mentioned above (see section 2.2.3).

2.3.2 The aim of the control projects is to reduce the sources of infection and the number of cases in the specified area.

2.3.3 The area covered by a project should depend on the personnel and equipment available.

2.3.4 In order to ensure success, an effort should be made to reach all sufferers from the disease, but in particular infants and children, since they are more frequently attacked than adults by the more infectious and more

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