

WORLD HEALTH
ORGANIZATION

الهيئة الصحية العالمية
المكتب الإقليمي لشرق البحر الأبيض

ORGANISATION MONDIALE
DE LA SANTÉ

REGIONAL OFFICE FOR THE
EASTERN MEDITERRANEAN

BUREAU RÉGIONAL DE LA
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REGIONAL COMMITTEE FOR THE
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TECHNICAL DISCUSSIONS - SUB-COMMITTEE A

ANCYLOSTOMIASIS

ANCYLOSTOMIASIS IN THE TRUST TERRITORY OF SOMALIA

by

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1. Ancylostomiasis in Somalia is a social disease, second only in seriousness to tuberculosis, syphilis, malaria and bilharziasis.

The demographic, social and economic implications are notable, especially along the rivers, where infestation is very diffused owing to the special ecological conditions of these zones and to the very bad conditions of life and of work among the agricultural population, as well as in the closely populated centres, where over-population and bad hygienic conditions exist. The high incidence of ancylostomiasis among the agricultural population is understandable in view of the rich and permanent water reservoirs (pools) especially in the middle and lower parts of the Juba and Uebi-Scebeli rivers, where the "concessioni" (big farms) and the "sciambe" (small agricultural tracts of land), both irrigated require great amount of manual labour.

In those agricultural zones ancylostomiasis has the character of a quasi-professional disease (Rural Ancylostomiasis): that is, in all patients attached to these agricultural works, who have little or no treatment, a vicious circle is established due to malnutrition, inability to work and poverty.

Ancylostomiasis in Somalia attacks generally children and young people below the age of eighteen, especially in very numerous families; the larger the family, the more intensive is the infestation of the disease itself. Ancylostomiasis occurs to some extent in the bush country, in the slightly populated centres of the internal regions, which are very far from the rivers, and in the slightly populated centres along the coast of the Indian Ocean. The disease is scarcely apparent in the populated centres of the northern zones of

Somalia (Nogal and Migiurtinia) due to the aridity of the land and the almost complete lack of ground water during the year, especially along the coast of the Aden Gulf.

As far as the infestation indices are concerned, as related to the population of the whole territory, only partial and approximative figures can be given, due to the enormous difference between the very high infestation-indices of the agricultural population living in riverine tracts, and the very low infestation indices of the nomadic and semi-nomadic population living in the Migiurtina area, for instance.

In the irrigated agricultural zones, of the regions of Juba and Uebi-Scebeli rivers, Giunta, Ragazzi, Talamonti, Mirra, etc. gave very high infestation indices affecting the whole native population, long before 1935. In the District of Villabruzzi alone, for example, Lipparoni collected within a period of eighteen years (from 1935 to 1952) 5,125 cases of ancylostomiasis. Of these cases, the majority has been reported in irrigation farms of industrial and intensive cultivation (sugar-cane, cotton, peanuts, maize, bananas) and in villages scattered along the river tracts, five kilometers inland, whose agricultural produce is very extensive (maize, cotton, etc.) and the lowest percentage (13.84%) being reported in the adjacent area among the nomadic and semi-nomadic population of the district. As far as the highly populated centres in the Mesopotamic zone and on the Indian Ocean coast, between Chisimaio and Obbia, are concerned, ancylostomiasis is widely spread to about the same extent as in the agricultural zones along the rivers. In fact, long before 1935 Veneroni gave for the town of Brava and index of thirty-four per cent of infestation on all the stool-examinations done, and Bacchelli an index of 38.15% for the town of Mogadiscio on 3,250 stool-examinations. Before the second World War, Ragazzi, who examined the faeces of ten per cent of the whole population, gave an index of seventy-eight per cent of infestation for the town of Itala and sixty-five per cent for the town of Merca.

In Mogadiscio, in the "Ambulatorio del Porto" (dispensary) alone between May 1952 and April 1956, 372 cases of ancylostomiasis were reported, among the inhabitants of the "Ahmara" and "Arabo" villages, mainly children, on the total stool-examinations of 5,700 (Angrisani) with an infestation index of 6.5%.

Clinical Features

It is very easy to identify clinically the Somalis affected by ancylostomiasis owing to their peculiar "facies mixedematososimile" and their characteristic colour of waxy-yellow and the brightness of the cheeks, the full whiteness of the "sclere" and the oral mucose "esangue". Oedema is present not

only in the face, the frontal, the neck, but also in the feet, the legs, the arms and the hands, and in very serious cases, in all the body, not excluding the serose cavities (anasarca). A peculiar symptom found in almost all the cases is due to the white transparency of the palms of the hands, the soles of the feet, and especially of the ungual bed, which is in full contrast with the darker colour of the back of the hands and of the top of the feet.

Intestinal Troubles

Nausea, vomiting, atrophy of the lingual papillae, gastrectasia, gastro-enteric dispepsia, faint signs of enterorrhagia (melena), epigastric pains (the so-called symptom of hunger), geofagia.

Circulatory Troubles

Cardiopalma with dispnea of effort, palpitations, enlargement of the aia cardiaca, sistolic murmur, final failure with gravitation - oedema, stasis-liver, ascites, stasis-kidneys, pulmonary ipostasis. To demonstrate the troubles of a cardiac nature, very frequent and very numerous scars are visible through effecting ignipunctures on the cardiac regions by the Somali patients themselves.

Neuropsychic Troubles

Headache, dizziness, buzzing of the ears, vertigos, grave psycho-asthenia, apatia, stupor, and various parestesiae.

Haemocromocitometrical Findings

Anaemia to be considered essentially of a pernicious and progressive type, of a low course, with a notable diminishing of the haemoglobinic index and a notable diminishing of the red cells. Poichilocytosis with policromatofilia and granular degeneration of the red cells is frequent; leucocytosis, relative linfocitasis and eosinofilia are also frequent. It is important to note that since the Somali patients affected by ancylostomiasis are also affected more frequently by other helminthic diseases, eosinofilia is due also to infestation by other worms.

2. At the actual moment there does not exist any special service in the Ministry of Health responsible for directing the control of the disease. Ancylostomiasis control is on the same level as other intestinal parasitical diseases either with hospital treatment in very serious cases, or by out-patient treatment at the "ambulatori" (dispensaries) of all the territory. Therefore, no special budget or personnel, or even a national epidemiological survey team exist in the country.

3. Research work on ancylostomiasis was conducted in Somalia before the last World War (Unità Mobile - Dottor Ragazzi). Actually there is no programme of research on a governmental level. Partial research in some zones has been conducted during the past years by some doctors on their own initiative (Lipparoni, Angrisani), for scientific publications.

4. There is no estimate of any relationship of ancylostomiasis to nutrition, anaemia and to the level of intelligence of school children. We have at our disposal only a general knowledge of a clinical level, through data reported by the personal charts of hospital-treated patients.

5. The medicaments preferably used against ancylostomiasis are:

- a) Carbon tetrachloride (pills of 0.60 grammes and 1.20 grammes);
- b) Thymol;
- c) Chloroform

Little used: chenopodium oil and ethylresorcinol.

Much used: coadiuvant-therapy on basis of arsenic and iron.

As at the moment no mass treatment campaigns are being conducted against ancylostomiasis, the quantity of medicaments used per annum is very little and consequently the annual cost is very low.

6. No special programme exists for the control of ancylostomiasis but, the general hygienic measures through the improvement of environmental sanitation (construction of latrines, etc.) have had beneficial consequences in inhabited centres where hygienic measures have demonstrated more functional developments.

7. Health education of the public, as a means to prevent ancylostomiasis has been utilized solely on a general level, that is on the same level as the fight against intestinal diseases of varying parasital natures, on the basis of gradual and constant improvement of the social and hygienic conditions in general.

8. There does not exist at the moment any promulgated law; nor do any specific regulations exist in the fight against ancylostomiasis. The general opinion is that a local legislation, regarding hygienic measures could progressively be applied with positive results.

9. The current programmes for agricultural irrigation and development of native farming must take into account the problem of an eventual increase in the infestation of ancylostomiasis (analogous problem of bilharziasis), which will possibly conduct a plan of common action between the health authorities and those responsible for the irrigation plans.

10. In Somalia the output of work of the patients affected by ancylostomiasis is strongly reduced. There do not exist at the moment in Somalia any industrial organizations which are particularly limited in their output of work.

11. The various programmes of economic development will take into account the coordination between work and social medicine in regard to the prevention of ancylostomiasis.

12. No institution is carrying on programmes of research on ancylostomiasis problem, nor on chemotherapy.

13. Control projects against ancylostomiasis are being seriously considered by the Ministry of Health.

14. At the moment the Government of Somalia would accept with pleasure any kind of assistance in the control and fight against ancylostomiasis either from international or non-governmental organizations.

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Circulatory Troubles

Dispnoea of effort, palpitations, enlargement of the heart, systolic murmurs, final failure with gravitation - oedema, hepatic stasis, ascites, renal stasis, pulmonary hypostasis. Very frequently scars are visible as a result of igniting punctures on the cardiac regions performed by the Somali patients themselves, as a treatment for their heart trouble.

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