

The Treatment of Pulmonary Tuberculosis Amongst Africans in Bulawayo

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PART I

The incidence of active pulmonary tuberculosis amongst Africans in Bulawayo and district in 1955 was much higher than the 6.3 cases per 1,000 persons examined which was the figure for 1958, the first year that reasonably accurate figures were produced. In 1960 the incidence had fallen to 2.4 cases per 1,000 people examined.

With generosity, some of this improvement could be attributed to improved social conditions. With faith, some could be attributed to the effects of B.C.G. vaccination.

But without the exercise of either of these attributes one could with confidence point to the removal of two and a half thousand cases of active pulmonary tuberculosis from the reservoir of infection in the district as being the prime cause of this improvement.

The following account is a review of the treatment methods used in the care of these cases in Bulawayo during the period 1955 to 1959 inclusive.

IN-PATIENT INSTITUTIONS INVOLVED

The Government hospital for tuberculous cases at Mpilo opened in December, 1954, with 150 beds, 75 male and 75 for women and children. In September, 1955, the Bulawayo municipality entered the field by providing 15 male beds at their infectious diseases hospital. This number was gradually increased through the ensuing years to 50 female beds and 32 male beds.

In June, 1957, the Rhodesian Association for the Prevention of Tuberculosis provided another 108 male beds sited at Mpopoma, a few miles away. With the opening of the main Mpilo general hospital in 1958 a further 40 or so children's beds became available, producing a total of 380 beds approximately.

Thus three administratively and geographically separate institutions joined forces to provide treatment beds, the overall medical care and control of all remaining under the Government centre at Mpilo.

ORGANISATION

The Mpilo chest hospital became the receiving centre for all African tuberculous cases of the lung. After assessment and a preliminary stay at Mpilo they were transferred as needed to

the two other centres. At these centres, as they improved, they gradually attained out-patient status. If they had a home in Bulawayo they were then discharged to out-patients. If they had no home they were retained in either centre until the full course of treatment was concluded.

On discharge from any of the centres, whether to out-patient treatment or to surveillance on completion of treatment, the patient reverted back to the parent unit at Mpilo, where his documents and X-rays were then filed.

All routine chest X-rays and most of the laboratory procedures were carried out at the parent unit, irrespective of where the patient was accommodated.

POLICY OF THE HOSPITAL

From the beginning it was decided that the prime function of institutional treatment of tuberculosis amongst Africans was to segregate the infectious case from the community. It followed that where the pressure on beds was great there would be no question of designating some units as convalescent; all would be used for acute infectious cases.

It also meant that a patient who failed to convert his sputum would never be released from hospital. Domiciliary conditions being what they were, it was argued that it would be unwise to release a positive patient back to his home environment. The only exception to this rule was to discharge on disciplinary grounds occasional criminal type patients where it was obvious more harm than good would be done by retaining them.

It was decided that all forms of tuberculosis would be accepted and treated, but that the infectious chest case would always take precedence. It was also decided to admit and retain all patients, irrespective of where their homes were. Even repatriation of aliens was not practised, except as a disciplinary measure to return persistent offenders against hospital rules back to their own country.

"SOCIAL" BACKGROUND OF THE PATIENT

The records of all male patients admitted to hospital between January, 1955, and April, 1956, and found to be suffering from pulmonary tuberculosis, were examined.

The following points emerged:

(a) Age

Age in years ...	14-19	20-29	30-39	40-49	50 or over	Total
Numbers	9	71	47	39	24	190
Percentage	5	37	25	21	12	100

The age distribution of the patients probably just reflected the age group of the population as a whole. Figures for the population at risk in these age groups were unobtainable.

(b) Birthplace

Eighty per cent. of these male patients were indigenous to Southern Rhodesia. Of the remainder, 11 per cent. were from Northern Rhodesia, 4 per cent. from Nyasaland, 4 per cent. from Portuguese East Africa and 1 per cent. from Bechuanaland.

(c) Home

Sixty per cent. gave Bulawayo as their home prior to admission; the remaining 40 per cent., with few exceptions, came from the rest of Matabeleland.

(d) Marital State

Fifty per cent. classified themselves as single; the remainder claimed to have on the average 4.5 dependants each who were actually living with them (and were thus home contacts).

(e) Occupation.

	Per cent.
Factory workers (textile mainly)	12
Domestic servants	11
Labourers	50
Office —	5
None given (mainly from rural villages)	22

TYPE OF LESION

A similar exercise was carried out on the X-ray photographs of adult male and female patients to demonstrate, if possible, the average extent and type of disease.

In 1956 in the X-ray file there were 500 sets of X-ray plates of patients who had been discharged from hospital for any reason. Those plates, filed under the letters A, B, C, D and E, were removed from the file and examined, representing 61 sets out of the 500 (a 12 per cent. sample).

Examination of these plates revealed that 24 plates had unilateral disease, 37 bilateral disease. Of the unilateral disease, 11 were left-sided and 13 right-sided. Of the bilateral disease, eight were predominantly left-sided and four predominantly right-sided, the remainder being equally distributed.

Thus 60 per cent. of the cases present with bilateral disease, but there does not appear to be a preponderance of left- or right-sided lesions.

Number of lesions with one zone only involved —	8
“ “ “ “ two “ “ “	11
“ “ “ “ three “ “ “	13
“ “ “ “ four “ “ “	13
“ “ “ “ five “ “ “	5
“ “ “ “ six “ “ “	11

The average number of zones involved in each case was 3.1—that is equivalent to the involvement of one whole lung.

When analysed by upper, middle and lower zones the expected preponderance of upper zone disease was not demonstrated, the middle and upper zones being equally represented.

The lower zone distribution, although less, was again not as small as expected:

Upper zones involved	79
Middle zones involved	80
Lower zones involved	53

No doubt the explanation is simply that the disease commenced most commonly in the upper lobes or zones, but by the time of presentation the disease had spread to the middle and lower zones. An analysis of lesions presenting earlier for treatment would no doubt reveal the more usually expected distribution of upper zone disease predominating.

Of these 61 cases, 34 (56 per cent.) revealed cavitation on ordinary posterior-anterior films. Of these cavities, 24 were judged as being of the tension type and 10 could be described as due to liquefactive changes in an area of consolidation. Fourteen had multiple cavities.

It should be remembered that these cases presented in 1956, a little over one year after the opening of the hospital, and thus represent the “normal” case of those days—that is, of an African who had delayed seeking hospital advice until native medicine had been tried and family permission obtained to go to hospital as a last resort.

Later, as the reputation of the hospital grew, but mainly because of the institution of routine chest X-ray on all patients admitted to the adjacent Mpilo general hospital and of the provision of a static miniature X-ray at the adjacent chest clinic, the type of lesion admitted to Mpilo chest hospital became a much less advanced one in many cases.