Tuberculosis in the African Community in the City of Salisbury

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Introduction

This paper aims to give a brief account of tuberculosis in the various African Townships of the City of Salisbury, and to describe a service which has been developed to provide comprehensive treatment of the disease and the tracing and examination of all contacts using the existing facilities and staff. It operates within the city boundaries, and is based on the out-patient ambulatory treatment of all patients. This is in accordance with the Report of the W.H.O. Expert Committee on Tuberculosis (1973). The existing municipal clinics undertake out-patient treatment, and these, together with a hospital block and a diagnostic chest clinic, have been combined into a closely knit organisation — a description of which forms the first part of this paper. Then follow some preliminary observations on the notification of cases during the six month period 1st October, 1974, to 31st March, 1975.

The Service

The chest clinic is in a building which also houses miniature and standard X-ray machines, while other parts provide various medical and dental facilities for the examination and treatment of employed and unemployed workers. Regular out-patient sessions are held in the chest clinic five mornings per week to which all cases suspected of having pulmonary tuberculosis are referred for examination. They come from the various municipal clinics, the miniature X-ray unit, and private practitioners. In addition, all those on out-patient treatment are seen regularly for assessment, or for encouragement and investigations if they have been defaulting. Checking minor complications of therapy is also done at these sessions.

A tuberculosis register has been started and is maintained by the chest clinic staff who also run an active follow-up service, and contact tracing system. Health assistants of the City Health Department actually visit the contacts and send them to the chest clinic for examination. Lists of all such contacts are supplied to the sister-in-charge who is responsible for seeing that all come for examination before the

investigations on each particular case are closed. The follow-up service handles all problems concerning defaulters. The latter are notified direct from the clinic where they should be attending to the sister-in-charge, chest clinic, who arranges for each patient to be followed up through the health assistants.

Close liaison in these various fields is maintained with the Government Tuberculosis Officer who is responsible for all such matters in the surrounding province so that all relevant information is readily available.

In-patient treatment is carried out in the tuberculosis unit of the African Infectious Diseases Hospital. This is a modern three-storey building with six wards having a total of 112 beds and cots. All those with active pulmonary disease are treated as in-patients until they are sputum negative on repeated direct slide examination, and in good physical health. This usually takes about six to eight weeks after which they are discharged to continue treatment as out-patients. As a result of this policy, it is considered that the number of beds in the tuberculosis unit are adequate to meet the needs of the community — even if further case finding reveals a higher proportion of cases than at present.

On discharge, the patient selects the out-patient clinic that is appropriate to his needs and is then registered with the clinic. Treatment is available at special out-patient departments at the tuberculosis unit and the chest clinic which opens outside normal working hours for the benefit of those who are employed, at fourteen municipal clinics sited in the townships and other parts of the city, and at certain special clinics run by large firms, the railways, etc. All tuberculosis treatment and drugs are free, and supplies are issued to all these centres as and when required. Patients are now treated at these clinics on any type of regimen, i.e., first or second line drugs; daily streptomycin, etc. There is strict control to ensure that any defaulters are found quickly so that treatment is not interrupted unduly. It is interesting to record that very little trouble in this respect occurs among those patients who are on daily streptomycin. Their default rate is only about 2 per cent., whereas it is now almost 8-9 per cent. of those who are on oral therapy and attend for their tablets at monthly intervals. However, this figure has fallen quite noticeably in the last few months, and it is hoped that it will fall still further.

Adult patients normally receive daily streptomycin together with isoniazid and thiacetazone in the form of HT3 tablets for six months, and then thereafter continue on daily HT3 for a further period of at least one year. This ensures a continuous course of treatment lasting at least eighteen months. The incidence of drug resistance, not only in Salisbury but throughout the country, is remarkably low. Out of a total of 246 cases, one proved resistant to all three first line drugs, but responded extremely well to second line therapy. This may, perhaps, be explained by the care taken by all concerned to ensure that patients complete the prescribed courses. Contacts of all notified cases are followed up and those living in the city referred to the chest clinic. All older children and adults (except pregnant women) have a routine X-ray, physical examination and bacteriological sputum examination. Young children and infants are Heaf tested in the first instance and all negative and low grade reactors given BCG vaccination. Strongly positive reactors are X-rayed and investigated, those who have active disease being treated whilst the others receive prophylactic chemotherapy.

This review indicates that a comprehensive organisation has been evolved without additional expenditure or staff by utilising all branches of the existing municipal health service. The fact that it is working smoothly and well is due to the high *esprit de corps* of all members of the staff, especially those engaged full time in the tuberculosis unit and chest clinic. Finally, it must not be overlooked that a considerable reduction in the number of beds and bed occupancy has been achieved with consequent savings. Short stay in hospital has another great advantage as it is very popular with patients — especially men. Not only can they usually keep their jobs, but generally speaking, they are discharged or are on the point of discharge before their sick pay ends.

Having given a factual account of the service, it now remains to refer briefly to the statistics for the six-month period mentioned in the introduction. All notifications have been analysed in the accompanying table. During this period a total of 246 cases were notified of whom 204 were residents of Greater Salisbury. If notifications are maintained at this level, the total would be approximately 400 for the year, or about 1:1 000 of the African population of the city. However, it is unrealistic to speculate in this manner on so short a period of time so no firm statements on these figures will be made in this paper.

Column I shows the distribution of cases throughout the city and calls for a few com-

Townships	Total No. of Cases	Age and Sex Distribution														No. of Sputum Pos. Cases		No. of Heaf Pos. Cases	
		GROUP I 0-11 mnths.		GROUP II 1-4		GROUP III 5-14		GROUP IV 15-24		GROUP V 25-44		GROUP VI 45-59		GROUP VII 60+ years					
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Mufakose	30	2	—	3	4	3	4	3	—	2	2	6	1	—	—	9	2	11	8
Kambuzuma	15	1	—	1	2	2	1	1	1	5	—	—	1	—	—	6	2	4	3
Highfield	30	—	—	3	1	1	1	5	5	6	4	2	—	2	—	13	8	5	4
Mabvuku	17	—	—	1	1	1	6	1	—	3	4	—	—	—	—	4	5	2	6
Harari	26	—	—	3	2	—	—	3	—	8	3	6	—	1	—	13	7	2	3
Glen Norah	16	—	—	1	—	1	—	2	4	5	1	2	—	—	—	7	5	4	—
Gillingham	9	—	—	1	2	—	2	1	—	1	2	—	—	—	—	2	2	3	3
St. Mary's	19	—	1	2	1	3	4	1	1	3	1	2	—	—	—	7	3	6	4
Tafara	2	—	—	—	—	—	—	1	—	—	—	1	—	—	—	1	—	1	—
European Res. Areas	20	—	—	—	1	—	2	1	3	1	4	6	1	1	—	11	7	1	3
Rugare	3	—	—	—	—	—	—	—	—	2	—	1	—	—	—	2	1	—	—
Prisons, etc.	17	—	—	—	—	—	—	1	—	9	1	5	1	—	—	10	3	—	—
TOTALS	204	3	1	15	14	11	20	20	14	45	22	31	4	4	—	85	45	39	34

ments. Firstly, only two cases were from the township of Tafara which has a population of approximately 13 000. This result stands out as all other townships show a much higher incidence, and the results are even stranger when the figures for Mabvuku are considered. The latter township is almost contiguous with Tafara and has an incidence of 1:1 000. It would appear that further investigations are required as a result of these figures and is an excellent example of the way statistics highlight matters of interest.

The rest of the table shows the age/sex distribution and the number of sputum positive cases. It is considered that an analysis of this kind kept on a monthly basis is extremely useful in building up a picture of the disease pattern, and also provides information about the pool of infection. In considering these figures, the first point is the very small number of infants who have been discovered. It is tempting to speculate that this might be due, in part at any rate, to the policy of vaccinating all newborn babies with BCG.

Almost half the total number of cases occur in the young working population Group IV and V, yet less than one-third of these are females. This may be due to the fact that large numbers of wives and children have to live in their home villages in the rural areas outside the city but, as it is, the figures appear to indicate a further possible line of investigation. Group VII also contains a very small number of cases, and here too, further research may be necessary.

Sputum results show that approximately two-thirds of all cases notified were AFB positive, and as the great majority were resident in the city for at least six months, this gives an indication of the pool of infection. The remaining one-third comprised tuberculosis lymphadenitis, pleural effusions and children with primary lesions.

Summary

A brief account has been given of the Tuberculosis Service of Greater Salisbury together with some comments on the statistics that are being collected, and which, it is hoped, will form the basis of further studies.

References

WHO Expert Committee on Tuberculosis, 9th Report, December, 1973.