SMALLPOX IN CENTRAL PROVINCE, NYASALAND

BY

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Smallpox has always been endemic in Nyasaland, with occasional outbreaks of such proportions that they can be termed epidemics.

Vaccination campaigns are continually under way, and the year 1960 was no exception. In the middle of the year, however, and especially in the Central Province, much political opposition was encountered. As a result the vaccination programme was greatly restricted, and in some villages was brought to a standstill. This opposition was withdrawn in October and the vaccination campaign was reintroduced, though by this time it was too late to prevent outbreaks of the disease.

Isolation

The traditional method of isolation for the odd case of smallpox is to build a grass hut away from the village in an attempt to keep the patient in strict seclusion, prohibiting all visitors. Towards the end of October and the beginning of November the number of known cases occurring around the Lilongwe Township increased so much that other means of isolation had to be sought. Accordingly a large and spacious building, formerly used by the Public Works Department as a brick and tile works, was taken over. The building is approximately five miles (8 km.) from the Lilongwe Township, near enough for adequate supervision by the hospital staff. The main hall measures 93 by 48 ft. (28.3 by 14.6 m.) and on each side there is a walled and roofed verandah. The building is constructed of latticed brickwork with a corrugated iron roof, and has an equable temperature even in the hottest weather.

Temporary kitchens and latrines were brought into use and water was supplied by means of a prime moving 800-gallon (3,630-litre) tanker.

Admissions

Despite the renewed efforts at mass vaccination there was an appreciable build-up in admissions over the first two months (November and December), with a slight fall over the Christmas season, and then a further increase. During the five-month period under review the admissions numbered 620 and the deaths 95 (see Table). Cases of variola minor accounted for roughly 70% of the total, and there were nine cases of vaccinia. Six patients had confluent smallpox and four of them died. It is impossible to estimate the number of patients and the number of deaths that were concealed, but from reports received these must have been considerable.

Age	No. Admitted				Deaths			
	Males	Females	Total		Males	Females	Total	
			No.	%			No.	%
Under 1 yr.	60	71	131	21.1	18	6	24	25.2
1 year	80	91	171	27.6	5	16	21	22.1
2-4 yrs.	92	83	175	28.4	11	8	19	20.0
5-9	41	44	85	13.7	5	11	16	16.8
10-18 yrs.	7	15	22	3.5	7	5	12	12.6
Adults	8	28	36	5.8	1	2	3	3.1
Total	288	332	620	100.1	47	48	95	99.8

Diagnosis and Treatment

Diagnosis did not present any great problem. The distribution of most of the rashes was typical (Figs. 1 and 2), but it is surprising how many of the cases showed pocks on the palms and the soles.

The history of onset was usually fever and general weakness for from three to five days and then the appearance of the rash. The source of infection was

FIG. 1

FIG. 2

FIG. 3

FIG. 1.—Early healing stage in variola major, showing scars. FIG. 2.—Variola major, almost confluent. FIG. 3.—Ophthalmia right eye due to pocks.

usually attributed to a neighbouring village or was stoutly alleged to be "unknown." Owing to the fears and superstitions of the relatives it was often difficult to elicit a proper history.

So far as the smallpox was concerned controlled experiments were made with various antibiotics, but none of them shortened the course of the disease to any appreciable extent. Calamine lotion was helpful in relieving local irritation, and in preventing extensive scratching which might have led to local sepsis.

Many of the patients developed conjunctivitis, which responded to chlortetracycline eye ointment. Five children developed pocks on the conjunctiva (Fig. 3); one child lost the sight of both eyes, three lost the sight of one eye, while the fifth child recovered completely. The most common complication, occurring mainly in the two younger age-groups, was bronchopneumonia, and this responded favourably to procaine penicillin.

The children were often undernourished, and various vitamin compounds with adequate diets helped considerably. If malaria developed it was treated with chloroquine sulphate.

If the patient survived the first three days of the toxæmic stage the prognosis was usually good, but it is impossible to be dogmatic on this point.

Vaccination Programme

Teams of vaccinators were organized in a concentrated drive to vaccinate the whole population. These teams were under the supervision of health inspectors and field officers, with trained health assistants and lay vaccinators. Vaccination points were established at which occupants of near-by villages could attend on specific days at fixed times. Individual villages were visited in an attempt to find stragglers. The people soon realized that these measures were designed for their benefit and little opposition was encountered. Despite these all-out efforts, however, cases of smallpox were still occurring at the time of writing.

Nothing was discovered which proved to be specific against smallpox as such, but prompt treatment of intercurrent infection and other complications did much to keep down the number of deaths.

Summary

Smallpox reached what may be termed epidemic proportions in the Central Province of Nyasaland in the third quarter of 1960. This could be attributed to political opposition to vaccination campaigns.

Traditional methods of isolation were abandoned, and what became virtually an isolation hospital for smallpox alone was opened near Central Province Headquarters at Lilongwe.

Opposition to vaccination ceasing in October, the programme could proceed, but by this time the damage was done.

Diagnosis presented no difficulty, but experimental treatment itself produced no new discovery, success being confined to complications.

As the number of cases increased, so the population became more and more co-operative towards the intensified vaccination drive. The majority of cases occurred in children under 10 years of age with no significant sex differentiation. Above this age female cases preponderated.

As regards death rates, the figures show a peculiar alternation of sexes in the four youngest groups. The greatest percentage of deaths occurred in children under 10 years of age.

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A HOSPITAL PLAN BASED ON A TEACHING CENTRE

BY

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The Board of Governors of the United Birmingham Hospitals, in co-operation with the Regional Hospital Board and Birmingham University, is preparing a plan for the Teaching Centre.* This article describes the principles on which the plan is based.

In many respects the present position is a difficult one for hospital planners. After a prolonged period of relative inactivity there is to be a new phase of building. But although this is badly needed we are not yet ready for it: we have a great deal to learn about how a hospital should be built and how it should function. Enough is known to make us dissatisfied with what we have had in the past, but not enough to enable us to plan confidently for the future.

Confronted with these difficulties planners may be said to fall into three classes. There are some who see no reason to do more than modernize the fittings and improve the décor of the traditional hospital. Others see many reasons for change but feel that the difficulties are too formidable. Still others believe that, whatever the difficulties, they must be faced, since it is unthinkable that we should perpetuate a tradition which is manifestly incapable of solving problems which past successes and an enlarged concept of public responsibility have jointly created.

Some Outstanding Issues

The tenability of this last viewpoint turns upon whether the problems are serious enough to justify an attempt to find a radical solution. In general terms the main task confronting the Health Service is to restrict its cost while extending its usefulness, but such a statement is too vague for the present purpose. More specifically, some of the outstanding issues with which the traditional services have proved inadequate, and in relation to which future planning must be directed, are the following.

1. *Standard of Care of the Mentally Ill and Aged Sick.*—The system of care which has evolved during the past two centuries has been unable to provide an adequate standard of care for the mentally ill and aged sick. In view of the age trend of the population this problem cannot fail to become more serious, and our success in dealing with it will provide perhaps the best single test of the achievement of the medical services.

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