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SMALLPOX

by

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The contribution to be made on the subject of smallpox (SP) will differ somewhat from the preceding ones. Knowledge of smallpox epidemiology, use of optimal vaccines and vaccination technique, as well as hazards and contra-indications for vaccination, are based on worldwide accepted experience gained by the global Smallpox Eradication Programme (SEP).

Nevertheless, the fact that smallpox cases exist or were at least present until recently in some parts of the Horn of Africa requires a critical review of the necessary epidemiological steps to be taken by the neighbouring countries. The most critical areas for verification of interruption of SP transmission are now considered to be southern Ethiopia, north-eastern Kenya and Somalia.

It is self-evident that Somalia, which experienced a very extended SP epidemic during this year, will continue to keep the surveillance/containment level at a maximum for at least one additional year after the discovery of the last case. In connection with the Somali outbreaks, some lessons were learned: transmissions often persisting undetected for four to six months in small nomadic groups living in remote areas, could only be interrupted by using locally hired workers travelling on foot, seeking SP cases and performing vaccinations.

Similarly Ethiopia, Kenya and Djibouti, all three to a greater or lesser extent bordering for the time being inaccessible, but potentially reinfected Ogaden, are confronted with the need to continue intensive SP surveillance in the areas adjacent to this region. Such activities, using well-trained local vaccinators and supervisors, took place up to July 1977 in most parts of the Ogaden itself; as a result, 157 rumours were checked, 80 000 vaccinations performed and 182 specimens for laboratory examination collected. Since September 1977 all Ethiopian districts (awrajas) bordering the Ogaden and considered as high risk areas have been covered by an intensified surveillance and vaccination campaign.

In Kenya, likewise, special teams are collecting specimens from suspect fever and rash cases in the northern provinces, but all have proved to be negative for SP. Activities will continue to be assisted by WHO. Djibouti, which experiences frequent population movements across the border and arrivals of displaced persons from the Ogaden, inaugurated special surveillance activities assisted by WHO.

In spite of all these efforts and the excellent collaboration of the SP Eradication Programme, the epidemiological situation remains problematic and rumours of outbreaks from inaccessible areas call for the greatest attention.

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of all countries concerned

In this respect the special vaccination campaigns and pockmark surveys carried out annually, and again in April 1977, by Sudanese SP special teams in Kassala, Red Sea, Blue Nile, Upper Nile and Equatoria provinces, should be considered as justified and important (Map 1) Since April 1977, 7[illegible] chickenpox and 516 cases suffering from other skin diseases were discovered, 101 patients suspected for smallpox were investigated and 8 samples taken for laboratory examination, all were found negative

During the pockmark survey, 279 persons were screened of whom 130, all over the age of 6 years, showed pockmarks The country will also continue special surveillance in Gezira province during the cotton picking and implantation seasons, when thousands of labourers are gathered from all over the country

The SP scene in the Horn of Africa also affects countries on the other side of the Red Sea Amongst these, particularly Democratic Yemen, Yemen Arab Republic, Saudi Arabia and the Gulf states have taken and will continue to take epidemiological measures improving confidence in the non-existence of SP cases and ensuring the immediate discovery of each suspected SP case In Yemen Arab Republic, special teams are searching and vaccinating the coastal area north and south of Hodeida, as well as that bordering Democratic Yemen which for its part, is doing the same in its coastal area facing Ethiopia and Somalia and in the region bordering Yemen Arab Republic Epidemiological measures taken by Saudi Arabia to prevent SP importation during the Haj period will not be discussed in detail, but national public health authorities and WHO epidemiologists have been preparing a plan which has made uncontrolled SP importation at least unlikely

Apart from the special epidemiological problem connected with the Haj, Saudi Arabia (as well as other countries of the region not yet declared smallpox-free) will have to intensify the existing surveillance and reporting system for rash and fever (chickenpox) cases and include specimen collection based on the following criteria:

- fever and rash cases associated with deaths
- fever and rash cases showing pustules on palms of hands and soles of feet
- fever and rash cases of non-SP-vaccinated adults

Using special WHO containers, specimens, preferably scabs, should be sent by the shortest possible route to EMRO The installation of a so-called "rumour book" or file, at least at provincial level, will give additional evidence

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of the efficiency of the surveillance system and permit the control of steps taken to finalize the diagnosis in suspected cases of SP (Attachment 1) Continuation of intensified surveillance activities, scar surveys and complete reporting of rash and fever-chickenpox-cases (attachment 2) will not only increase confidence in a complete interruption of smallpox transmission but also help considerably to document this fact for an international commission (see attachment 3)

With regard to SP vaccination as a component of EPI, the actual epidemiological situation calls for a continuation in general and even an intensification in areas where vaccination coverage is found to be poor or risks of importation high Basically, no interruption of primary vaccinations in countries bordering Ethiopia and states of the arabian peninsula should be considered until twelve months after reaching zero incidence, by which time contraindications for vaccination may be accepted with reservations only EPI teams, formerly participating in SEP, should furthermore play an important role in surveillance activities and pockmark survey It will depend on the public health structure of each individual country how and to what extent EPI could participate in this important task which the region will face during the next fe months

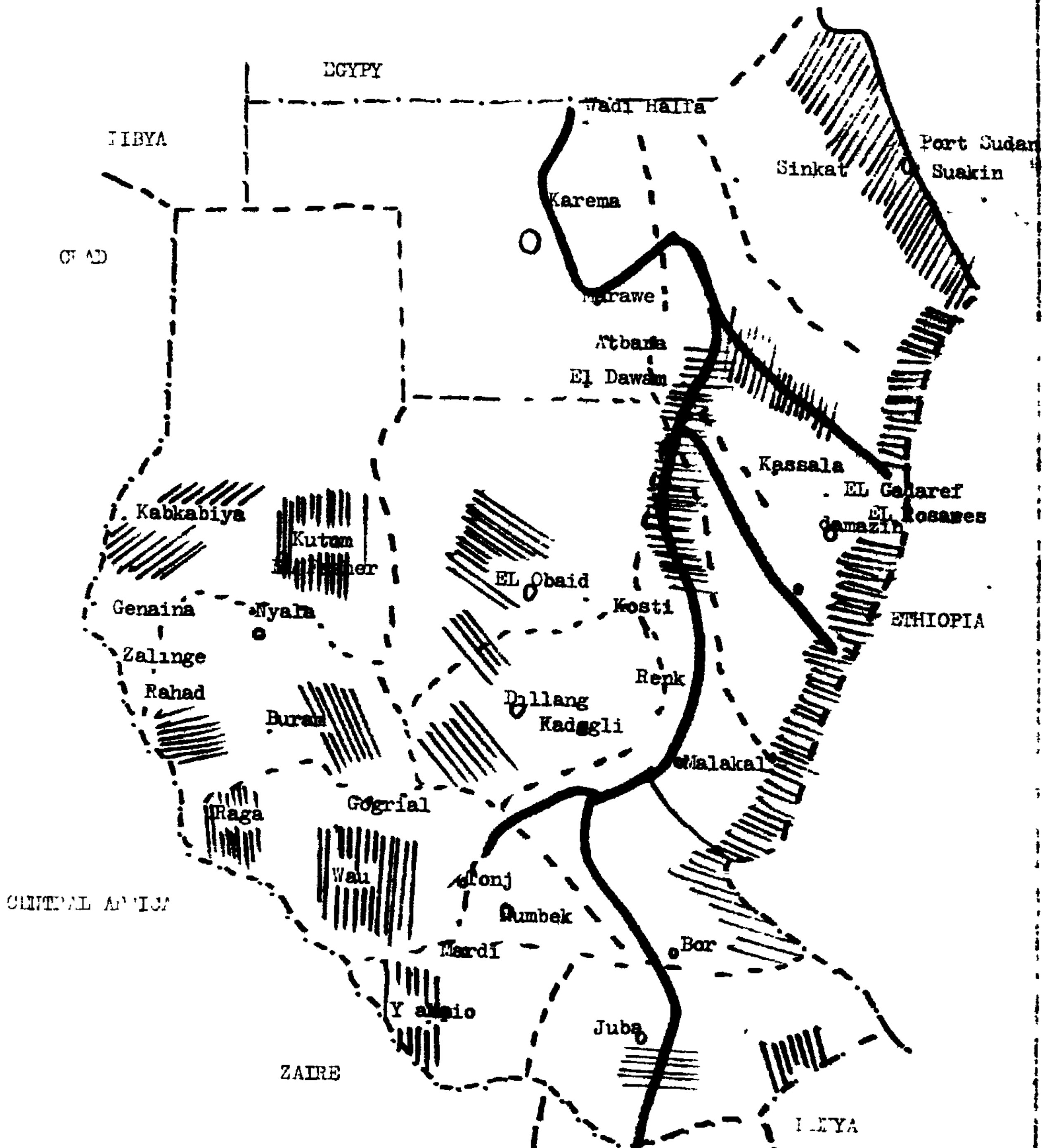
In conclusion, it must be stressed that SP vaccination will remain an important feature of EPI programmes bordering or close to the last known foci in the world, Additionally, maintaining a high level of rash and fever case surveillance, including specimen collection and complete reporting, will be necessary to recognize immediately any hidden focus or importation of smallpox EPI programmes, very often the legitimate daughters of SEP, should, whenever possible, co-operate, using the experience which many of their members have gained during recent years in the field.

MAP 1

SUDAN MAP

SHOWING AREAS COVERED BY SURVEILLANCE TEAMS

APRIL - JULY 77



key

areas covered by surveillance teams

Attachment 1

SUSPECTED SMALLPOX CASE INVESTIGATION

PROVINCE .... LOCALITY :................

DISTRICT :..................... VILLAGE :.................

Name of patient :.................
(print in block letters)

AGE :.................

SEX : M F

Date of Report :....................

Date of Examination :................

Date of onset or rash :...............

Vaccination status

Vaccinated : YES/NO DATE :..................

Containment vaccination : DATE :..................

RESULT : ....

Condition of patient ------- Recovering
Died
Uncertain

Possible source of infection :

Where :

Specimen collection : Yes/ No When :

Sent on : To :

Results :

Name and title of investigator :

Date :

Final diagnosis :..
....

....
Signature
Epidemiologist.

N.B. : Original to be sent to :
EPI/Khartoum
One copy to operation officer
one copy remain to investigator

Attachment 2

CHICKENPOX REPORT

PROVINCE :.....................

MONTH :..................

Syrial No. of outbreak	No. of cases in the outbreak	Date	place of outbreak	Age group 0 - 1		2 - 4		5 - 15		15+		Remarks
				C	D	C	D	C	D	C	D	

N.B : special investigation was made because of:

(a) Outbreaks were associated with death.
(b) Severe chickenpox cases occurred.
(c) unvaccinated chickenpox cases.

In these cases specimen, preferably scabs, were taken for lab. examination.

Attachment 3

OUTLINE OF COUNTRY REPORT REQUIRED FOR CERTIFICATION OF SMALLPOX ERADICATION

1. COUNTRY AND PEOPLE

    1.1 Geography
    1.2 Climate
    1.3 Demography
    1.4 Socio-Economic level
    1.5 Movement of Population

        1.5.1 Migratery Workers
        1.5.2 Nomads
        1.5.3 Others

2. ADMINISTRATIVE AND HEALTH STRUCTURE

    2.1 The Civil Administration
    2.2 Health Manpower
    2.3 Health Establishments
    2.4 Organization Chart for Ministry of Health
    2.5 Duties and Responsibilities of Communicable Disease Control Unit.

3. SMALLPOX HISTORY AND EPIDEMIOLOGY

    3.1 Smallpox incidence in the last 20 years
    3.2 Incidence according to geographical divisions
    3.3 Morbidity, Mortality and Case fatality pattern of smallpox
    3.4 Distribution of smallpox by age and sex vaccination status
    3.5 Smallpox outbreaks, geographical location, magnitude, source
    3.6 Description of last known outbreak
    3.7 Exportation and Importation of smallpox cases if any.

4. SMALLPOX VACCINATION

    4.1 Smallpox vaccine producer and type (dried or liquid)
    4.2 Vaccination technique
    4.3 Vaccination policy
    4.4 Organization of vaccine delivery
    4.5 Vaccine distribution, storage and handling
    4.6 Number of vaccinations performed

        by year - last 10 years
        by primary and revaccination
        by age

    4.7 Complication of smallpox vaccination
    4.8 Cultural and religious resistance to smallpox vaccination

Attachment 3 (cont'd)

5. REPORTING AND RECORD- KEEPING SYSTEM

    5.1 Weekly epidemiological reports
    5.2 Reporting of outbreaks
    5.3 Reporting of vaccination performance
    5.4 Reporting unit.

6. LABORATORY DIAGNOSIS

    6.1 Policy
    6.2 Collection of specimens
    6.3 Laboratory for diagnosis
    6.4 Results of testing (last 5 years)

7. SUSPECT CASE INVESTIGATION

    7.1 Policy
    7.2 Record of suspect cases by geographical unit
    7.3 Record of suspect cases by diagnosis

8. HEALTH TRAINING

    8.1 Health training facilities
    8.2 Type of training offered