



Fig. 2—Smallpox cases in Daarta village, Somalia (outbreak no. 911) between February and July, 1977.

ease spread slowly, taking 5 months to infect 19 persons. The primary vaccination response of eight villagers during the period of containment is a sign of probable susceptibility, and suggests that transmission might have continued had containment measures not been instituted.

The transmission pattern in Mandeelo was not unique. Four other examples of prolonged transmission in small Somali population groups were also detected (table III).

Only in outbreak 911 was it possible to determine individual weeks of attack. In this village, a nomadic woman, herself a case of smallpox, was able to identify the week of attack for each case (fig. 2).

The spread of smallpox over long periods in rural areas has not been a major problem during the global eradication campaign. In the densely populated, highly mobile populations of Asia, rural smallpox foci were usually quickly detected in large population centres to which cases were imported or by reports brought by travellers. Prolonged undetected transmission of the type observed in Somalia was not noted. Several possible explanations exist for the slow spread observed among Somali nomads. The strain of smallpox in Somalia, *Variola minor*, is of low virulence. The case-fatality rate was 0.5% compared with that of West Africa's 10–15% and Asia's 15–40%. Patients in Somalia were less seriously ill and remained mobile even during the acute phase of illness so that the disease was not readily recognised as smallpox. Secondly, most nomadic activity occurs in the open and opportunities for concentrated aerosol exposure within closed spaces are less common than in settled populations. Thirdly, nomadic patterns of activity (herding, farming, collecting water) limit contact between members of the group. The main exception to this is the contact between children who gather daily for religious training in a Koranic school and frequently play together. The lower attack-rate in those older than 15 years may reflect low exposure or may relate to protection due to unrecollected vaccination or smallpox illness as young children.

The implication of prolonged smallpox transmission in isolated nomadic groups is clear. Smallpox can maintain itself in isolated rural populations in eastern Africa for periods of at least 5 months. Documentation that smallpox transmission has been interrupted will thus require careful surveillance of such populations, especially remote nomadic groups, during the next 2 years.

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## Letters to the Editor

### BLOOD-DONORS WITH HISTORY OF JAUNDICE

SIR,—People with a history of jaundice were formerly not allowed to be blood-donors, but the second report of the D.H.S.S. Advisory Group on Testing for the Presence of Hepatitis B Surface Antigen and its Antibody (1975) concluded that there was no scientific basis for this exclusion, provided that the donors' sera were tested for HB<sub>s</sub>Ag by reverse passive hæmagglutination, or a test of at least equal sensitivity, and that the donors had not had hepatitis or jaundice during the previous twelve months. W.H.O. experts have made the same recommendation.<sup>1</sup> We wondered if the inclusion of these donors would lead to an increased incidence of HB<sub>s</sub>Ag positives. The table shows our experience for the period Feb. 3, 1977, to Aug. 10, 1978.

#### MARKERS FOR HEPATITIS B EXPOSURE IN DONATED BLOOD

New donors	No.	HB <sub>s</sub> Ag+	HB <sub>s</sub> Ab+
History of jaundice	2561	6 (0.23%)	5 (0.20%)
No history of jaundice	38333	26 (0.07%)	16 (0.04%)
$\chi^2$	..	8.51	11.02
P	..	<0.005	<0.001

The sera were tested for HB<sub>s</sub>Ag by 'Hepatest' (Wellcome Reagents) and for HB<sub>s</sub>Ab by the insensitive immunodiffusion technique. Donors with a history of jaundice were 3.5 times as likely to be HB<sub>s</sub>Ag positive as donors without such a history and 4.7 times as likely to have HB<sub>s</sub>Ab. Clearly hepatitis B was the cause of their jaundice, at least in some cases. Nevertheless, the rate of HB<sub>s</sub>Ag positives amongst these people is still small, and with the sensitive tests at present in use we do not believe that these figures mean that such donors ought to be excluded from the panels. The regular inclusion of such donors might lead to 1 additional HB<sub>s</sub>Ag positive being detected in every 10 000 new donors; we believe that the modified hepatest is approximately 97.5% efficient so<sup>2</sup> we should expect to have 1 extra undetected positive in 400 000 new donors. This is an acceptable level of risk, and even these estimates are probably too high because many would-be donors with a history of jaundice were waiting to give blood as soon as this was allowed, so the proportion of donors with such a history will probably be less in future. On the other hand, the epidemiology of hepatitis B is complex and may be different in other areas or indeed at other times, so that studies of the rate of HB<sub>s</sub>Ag positivity amongst people with a history of jaundice in other areas would be of great interest.

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### SOMATOSTATIN IN ACUTE GASTRODUODENAL HÆMORRHAGE

SIR,—Somatostatin (s.s.T.) is a potent inhibitor of test-meal and pentagastrin-stimulated gastric acid<sup>3</sup> and pepsin secretion,<sup>4</sup> and of gastrin release.<sup>3</sup> Because it inhibits these ulcerogenic factors, partly prevents stress ulcer formation in rats,<sup>5,6</sup> and

1. *Tech. Rep. Ser. Wld Hlth Org.* 1977, no. 602.

2. Renton, P. H., Taberner, D. A., Roach, D. G. *Vox Sang.* (in the press).

3. Bloom, S. R., and others. *Lancet*, 1974, ii, 1106

4. Gomez-Pan, A., and others, *ibid.*, 197, i, 880.

5. Mattes, P., Lauterbach, H. H., Rapus, S. *Langenbecks Arch. Chir.* 1976, **341**, 297.

6. Zierden, E., and others. *Res. exp. Med.* 1976, **168**, 199.