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A Clinical Note on an Outbreak of Cutaneous Anthrax in the Lundi Native Reserve

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Twenty-two cases of cutaneous anthrax were admitted in January, 1954, to the Lundi Clinic in the Shabani district, and three further cases were seen shortly after.

The first two cases were admitted with lesions on the hand and shoulder. These, most aptly covered by the term "malignant pustule," consisted of a small dark or black necrotic centre surrounded by a rim of vesicles and pustules, and beyond that a ring of cellulitis and oedema of varying extent. Constitutional symptoms were marked, the temperature rising to 104° F.

The lesion progressed characteristically to form a central, black, concave eschar up to 1 in. in diameter, surrounded by a rim of vesicles and a decreasing area of cellulitis and oedema. Many cases were admitted in this stage, with only slight constitutional disturbance.

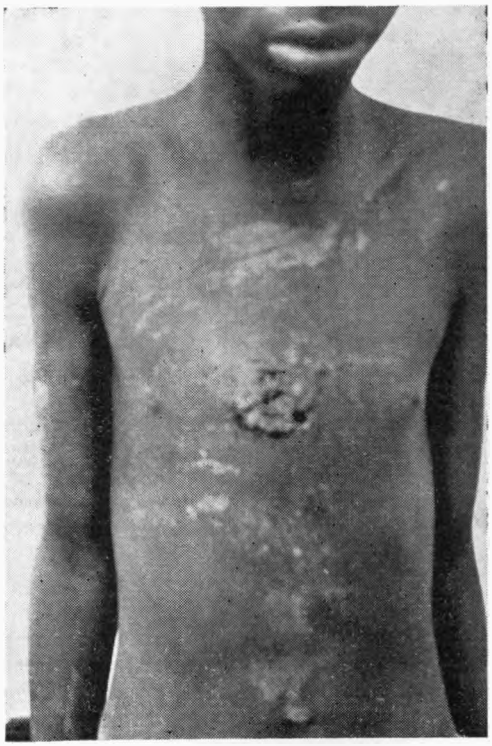

Fig. 1—Large anthrax pustule on front of chest wall.

Progress was slow, the resulting ulcer persisting for many weeks, though the patient by then felt fit.

The distribution of the malignant pustule in the 25 cases was as follows:—

Face	11
Rest of head	2
Trunk (Fig. 1)	3
Hand (Fig. 2) and forearm	5
Shoulder	2
Thigh	2

Close questioning elicited an admission that some had eaten the meat of four dead cattle at Marowanidza's kraal, from where the rest of the cases came.

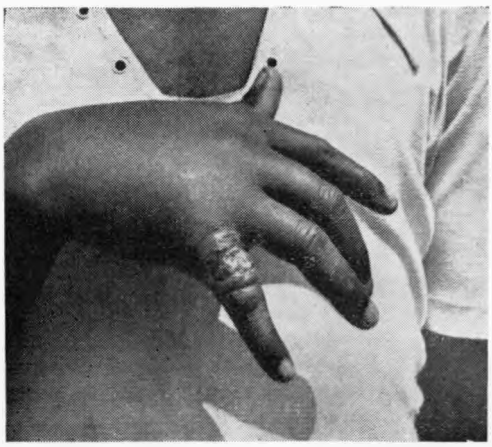

Fig. 2—A typical sore on the little finger.

Course.—This was generally mild. No case died in the clinic, although four deaths occurred at the kraal. The victims were stated to have had sores with considerable surrounding oedema. The severity of the illness appeared to vary with the extent of the cellulitis and oedema. The ulcers were not prone to develop a secondary infection and in bad cases remained as dry, deep, clear-cut, indolent lesions ultimately requiring skin-grafts.

No deaths occurred from respiratory or alimentary illness.

Children were also affected, and it was noticed that even very young infants tolerated their pustules comfortably.

Variants.—In an isolated case from another district the original pustule on the jaw, small though fierce-looking, was completely overshadowed by a most intense cellulitis and oedema, which closed the left eye completely

and spread cuirasse-like down the neck, chest and breast which became twice the normal size. Prostration and toxaemia were profound and swallowing and respiration so embarrassed that only fluids could be administered. The patient was kept in readiness for tracheotomy (if this would have been possible) or intubation. This case bore a certain resemblance to a snake-bite.

One case exhibited a double-pustule of the cheek, while another had a pustule on a finger and on one cheek. In addition there were many "pustules" of non-specific character which were seen in patients from the affected area at that time and which were probably caused by the *B. anthracis*.

No respiratory or intestinal forms were seen, although two cases from this area with near-fatal dysenteric symptoms of possible anthrax origin were observed; these are not included in the present series.

The most striking feature of the outbreak was the difficulty of demonstrating the causative bacillus. From all cases only one positive slide was obtained, though smears were taken at all stages and from all depths and areas of the wound, as well as from the peripheral blood. This same difficulty was experienced by veterinary surgeons, who, though knowing anthrax to be endemic in the district and being satisfied from the clinical features of their cases that they were dealing with anthrax, were able to obtain only one positive slide—this some weeks later from a donkey in the Chibi district.

The mode of infection in the cases which occurred some months later is difficult to explain. Dr. S. Graham, Regional Medical Officer of Health, Gwelo, suggested that disinterment of the carcases and handling of the bones may have caused infection by the spores.

Treatment

In all cases penicillin proved to be highly effective in doses of 300,000-600,000 units of the procaine salt twice daily for two to four days. The pustule was dusted with iodoform powder.

Acknowledgment.

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