IMPETIGO CONTAGIOSA
IN THE ARMY, TREATED WITH MICROCRYSTALLINE SULPHATHIAZOLE
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B A
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The Official Medical History of the War 1914-18 recorded that the maladies included under the term “impetigo” provided the largest number of cases of skin-disease admitted to medical units. During the present war, although much has been done by hygiene officers, observations on the spread of disease in hospitals show that the incidence of impetiginous conditions has been high; therefore, to reduce to a minimum the loss of man-days, those engaged in the care of skin-disease have tried to accelerate therapy to the greatest degree compatible with the well-being of their patients.

A constant watch has been kept on medical publications for new methods of therapy apparently suitable for military practice. The claim of Harris (1943) that “... single applications of new physical forms of the sulphonamides in the treatment of impetigo in my experience...” obviously demanded attention. Harris used a 20% suspension of microcrystalline sulphathiazole, although his published results appeared to refer entirely to children, his claim was sufficiently strong to merit investigation. Therefore arrangements were made for a clinical trial of the drug in the Army. Owing to the difficulties of supplies of the suspension in normal saline it was decided to use a 15% suspension and local applications of 4% tragacanth.

The treatments were as follows:

A. Microcrystalline sulphathiazole in 15% suspension.
B. Ordinary sulphathiazole in 15% suspension.
C. Lotio cupro-zincica.

The following instructions were issued:

Treatment “A,” with microcrystalline sulphathiazole.—The patient’s face and neck are cleansed, his beard shaved or clipped, and the crusts removed from the lesions. On the first occasion the suspension is applied over the entire face—to prevent further lesions on untreated areas. On subsequent occasions the crusted areas only are treated, care being taken that the powder crust formed on the lesions is not removed. The treatment is given twice daily. When the patient is judged sufficiently cured, zinc cream or Lassar’s paste may be applied to save a day or so of the period of treatment. To lessen the risk of sensitisation, microcrystalline sulphathiazole should not be applied to any lesion for longer than ten days.

Treatment “B,” with ordinary sulphathiazole.—After preparing the area as described for treatment A, apply a saline suspension of ordinary sulphathiazole 15%, tragacanth 4%, and normal saline to 100%. Treatment should be given twice daily, and should apply as closely as possible to the routine described for treatment A.

Treatment “C,” with lotio cupro-zincica.—Prepare the area as for treatment A and treat the lesions on the first day the whole of the area with lotio cupro-zincica (copper sulphate gr. 2, zinc sulphate gr. 1, camphor gr. 1, amine to 1 fluid oz.). The lesions should be thoroughly swabbed with the lotion for two minutes four times daily and thereafter are usually best left exposed to the air.

The hospitals were instructed not to give sulphonamides concurrently by the mouth to patients under investigation. Cases were to be regarded as cured when the skin appeared normal or only very slightly erythematous, so that treatment could be discontinued without a relapse occurring. The data were to be recorded on suitable cards and forwarded to us for analysis.

RESULTS
After ten months we received only some 1270 out of a possible 2400 cards from fourteen of the sixteen hospitals. We had originally intended to use a more elaborate method of reporting, and analysis of the inconsistencies in the consistency of the results that it was evident that the random errors varied not only with the different treatments but also with the different hospitals. Hence it would not be legitimate to pool the results for a longer period than had originally been anticipated if a significant number of cases was to be obtained. In these complaints lies a clue to the reports received from other sources on many other occasions that many cases of impetigo were not cured either with sulphonamides or with pencillin.

Methods of investigation

The methods of investigation were as follows:

The dermatologists who cooperated in the investigation were instructed that the cases chosen for the inquiry were to be uncomplicated examples of impetigo contagiosa. Cases of eczema or dermatitis secondarily impetiginised and patients who had become sensitised to sulphonamides in hospital were to be excluded. Briefly it was the effect of microcrystalline sulphathiazole on the impetigo contagiosa of Tilbury Fox (1864) which was to be assessed.

The first point to be noted was that, despite the relatively large number of cases of eruptions of the face labelled impetigo which were referred to the hospitals concerned, true examples of impetigo contagiosa of the type required were not very common. The report suggests that the number of cases of impetigo of Tilbury Fox to other forms of septic eruptions of the face is approximately 1 to 2 (1270 to 2400); but this is a little misleading, as the 2400 possible cases of impetigo were to some extent inpatients and the ratio between classical impetigo contagiosa and other, impetiginous eruptions is probably much larger.

In the 1914–18 war impetigo was divided into four classes: impetigo contagiosa, ecthyma, impetigo second-
days of impetiginous infection before admission, to allow statistically for variations in this period. But we found that the average stay in hospital was not much affected by the duration of infection before admission; hence the statistical analysis could be simplified by neglecting this factor.

We finally adopted two methods of comparing the three treatments. First we went through the cards and classified as failures all cases where the dermatologist in charge of the case noted that the patient failed to respond to the treatment, or that it had to be changed, or that the patient relapsed within 7 days (tables I and II).

In eleven of the fourteen hospitals, treatment with ordinary sulphathiazole led to a longer stay than did lotio cupro-zincica, except for the risk of sensitisation in 2% of cases. The length of stay in hospital under treatment with either form of sulphathiazole is appreciably shorter than with lotio cupro-zincica.

The statistical methods were arranged and carried out by Capt. E. S. Cooper-Willis and Sergt. A. J. H. Morrell. A report drafted by Capt. E. S. Cooper-Willis constitutes the main portion of this article.

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