THE INFECTIVITY OF SCARLET FEVER.

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Although this disease is not of very frequent occurrence in the Service, still the contingency is always possible, especially in the depots and home garrisons; therefore any facts which tend to throw light upon the infectivity of scarlet fever and the question of its epidemic management are of importance to the army medical officer. Until quite recently it has been the almost invariable practice to retain patients suffering from this disease either in hospital or in their own quarters until the last trace of dead cuticle has vanished, but for many years past there has been a growing tendency to doubt whether the orthodox views with regard to the infectivity of the desquamated cuticle were based upon sound evidence. As we well know, the desquamating process is apt in some cases to drag on almost indefinitely, and, having apparently ceased, it is not unusual to find that it has recommenced. This sequence of events entails often an enormous tax upon isolation accommodation, and children, otherwise well, have to be detained for many weeks before the responsible officer cares to risk his reputation for what may be regarded as premature discharge. Some recent events in civil life have practically proved that what are termed "return" cases of scarlet fever are due in the main to existing or recurrent rhinorrhoea or otorrhoea, or to the persistence of infective material in the air passages, rather than to incomplete desquamation of the cuticle. Acting upon this knowledge certain medical officers of health have succeeded in reducing the number of their "return" cases to very small proportions by keeping patients about to be discharged in what may be called a diluted, if not entirely uninfected, atmosphere, and by the diligent application of nasal and aural and throat syringing.

An instructive paper upon this subject appeared in the Lancet of March 12, p. 72, by R. E. Lauder, the medical officer of health of Southampton; and it may be useful to recapitulate briefly certain points which he emphasises, as they teach some valuable lessons in sanitary administration. On the arrival of a case of scarlet fever at the isolation hospital it is examined in the ambulance and a swab taken from the throat for bacteriological examination. Doubtful cases are put into an observation ward, but cases of undoubted
scarlet fever are placed at once in what is called an "acute ward" until the acute phase of the disease has passed, and a bacteriological examination of the swab has excluded diphtheria. Once the acute phase is over the case is removed to a general ward, where all recent cases are kept apart from those which are convalescent; and if an aural or nasal discharge supervenes, or other complications arise, the patient is removed to a ward reserved for the purpose. At the end of the third week, if free from complications, the patient is transferred from the general ward to another pavilion which has been thoroughly disinfected, and to which no cases are admitted except through the out-bathing station with the same precautions as if they were being finally discharged from hospital. In this pavilion or ward the patient stays one week, the nose, ears and throat being syringed with a disinfectant each evening. At the end of this, the fourth week of disease, the patient undergoes the usual final bathing process and is discharged, no matter whatever may be the condition as to desquamation. After discharge of the patient the ward or pavilion in which he was housed is thoroughly disinfected. The general wards are disinfected at least once a month, or as indicated by the condition of the inmates. Mr. Lauder maintains that this method has not only freed the patients from the usual complications, such as rhinorrhea, otorrhoea, enlarged glands and albuminuria, but reduced the duration of the fever and the length of stay in bed. Before the adoption of this system the average stay in hospital was forty-eight days with 4·27 per cent. of "return" cases; since the system has been carried out the duration of stay in hospital has been but thirty-four days with 2·15 per cent. of "return" cases. These experiences are certainly suggestive, and further experiments on the same lines will be watched with interest. It is notorious that the severity of scarlet fever outbreaks, and the number of "return" cases, varies enormously in different years and places; therefore we need to be cautious in any generalisations, but we feel convinced that Mr. Lauder is working on right lines by differentiating his cases and providing a large number of small wards. Although such a provision means often a greater initial and administrative outlay, still, if the duration of stay in hospital be curtailed, a greater number of cases can be accommodated in a given time; we believe this to be the only true way of dealing with the isolation hospital problem. Apart from these administrative considerations, the experiences given are of the first importance as tending to elucidate the channels of infectivity in scarlet fever. It is probable that the orthodox belief in the
dangers of cuticular desquamation in scarlet fever will die hard, but for our own part we welcome this attack upon a view which has little more than tradition to support it. The newer method is based on experience, observation, and a belief that more segregation and classification of cases are essential; and, moreover, that "return cases" of scarlet fever are attributable not to the peeling condition, but mainly to undetected discharges from the respiratory passages and ears in those who have left the hospital. The value of personal observation in arriving at this belief is enhanced when we recall our want of knowledge of the specific organism of the disease, and our ignorance of where and when infection ceases.