

THE HOSPITAL AND HOME TREATMENT OF SCARLET FEVER.

By HENRY MALET, M.D.

Medical Officer of Health of Wolverhampton.

SINCE 1894 we have kept records of all cases of scarlet fever, the number of rooms in the house, the number of persons in the house, the ages of non-adults, and any previous attack of scarlet fever amongst them. These records are summarized yearly, and all instances where there are other susceptible persons in a house besides the primary case are tabulated. Persons over eighteen years of age, and those who have had a previous attack of scarlet fever are considered insusceptible.

The summary for the borough for 1906 is as follows: Hospital removal was effected in 247 houses. After the first removals there remained in these houses 629 children. In 221 of these houses there was no recurrence after removal, 547 children escaping. In 26 houses there was recurrence, 33 children being attacked. In these twenty-six houses 49 children still escaped after final hospital removals. Of the 33 secondary cases 11 were ill within two days of the previous removal, and probably infected before it; 3 were more than three weeks after the removal, and probably due to independent infection. This leaves 19 cases, possibly due to failure of hospital removal; or to speak more correctly, due to failure to secure complete disinfection.

Cases were treated at home with reasonable facility for isolation in 30 houses, where there were 50 children besides the primary cases. Secondary cases occurred in 5 of these houses, 5 recurring. One of these cases was ill within four days of the primary attack, and therefore probably infected before any care was taken.

The following tabular statement shows the results at a glance:—

	Hospital Removal.	Home Isolation.
Total houses	247	30
Cases recurred in	26	5
Number of children after primary cases	629	50
Number subsequently attacked	33, or 5·2%	5, or 10·0%
Number possibly due to failure	19, or 3·0%	4, or 8·0%
Number of children escaping	596, or 94·8%	45, or 90·0%

The following is the total for the thirteen years, 1894–1906:—

	Hospital.	Home.
Total houses	2,904	376
Cases recurred in	295	129
Number of children after primary cases	7,766	721
Number of these attacked	372, or 4·8%	179, or 24·8%
Number possibly due to failure	183, or 2·4%	120, or 16·6%
Number of children escaping	7,394, or 95·2%	542, or 75·2%

The cases treated at home were, of course, in roomy houses where isolation was possible ;* those removed to the hospital include a great majority from small and comparatively crowded houses ; thus, the evidently greater protection afforded the latter is very striking. There is, however, one correction which should be made in estimating the amount of protection which hospital removal affords the children left in the houses. In some instances, after the return home of a hospital case fresh cases occur. This year we had 16 such cases. If we add these cases to our 19 failures we have 35 cases due to hospital failure out of 629 children in the year, or 5·6 per cent, compared with 8·0 per cent in the home cases. During the past thirteen years we have had 225 of these return cases, far more than the 183 cases due to failure in the case of the first removals. Together these amount to 408 re-infections in 7,766 children, or 5·3 per cent, compared with 16·6 per cent of the children in the case of home isolation.

Many persons are nevertheless much disappointed with the failure of hospital isolation to stamp out, or at least more completely limit, scarlet fever. This disappointment is due to ignorance of the causes of the failure, and of the difficulties that have to be contended with. The actual failure is, of course, in the first place, to secure complete destruction of infection when a patient is removed. Practical disinfection of rooms and clothing, especially in the houses of the poor, is a very difficult thing to attain ; in few cases can we hope for a perfect result ; this is the first cause of failure, and considering its gravity it is really remarkable that we have so few cases recurring after removals from poor houses. The second and more potent cause of failure is the number of cases that remain undetected until they have had free scope to spread infection ; this being intensified by the ignorance or gross negligence of so many of the public. We have continual examples of this, and while we have, any very great limitation of scarlet fever during times when it is at all epidemic in character must be quite impossible. The following are a few typical cases which occurred during the year :—A. Taken ill in school and sent home ; mother sent the boy to school again next day ailing ; teacher sent him home, doctor called in and found scarlet fever. B, being subject to sore throats no notice was taken at first, and case attended school until teacher noticed peeling, then was sent home, and

* Besides the patient, in one instance 5 children were in a 16-roomed house with 9 bedrooms ; in another, the same number in a 7-roomed house ; in another, 2 children in an 8-roomed house, and 2 in a 7-roomed house ; 1 child in 11-roomed house, and 1 in 10-roomed house. In such cases home isolation ought to be easily practicable.

taken to a doctor. C, a child, was ill while away from home, kept in bed for a fortnight, thought to be German Measles; after a total four weeks' absence came home by train; eleven days later mother and two other children had scarlet fever, and C was found peeling. D had a rash, supposed to be nettle rash, no doctor; after thirteen days, during which D was attending school, another child had scarlet fever, and D was found peeling. E was ill in school, stayed away for a week, then returned for a week, when teacher found peeling. F, similar to last, was away from school with a sore throat for a few days, returned for a fortnight before teacher noticed peeling and reported; on Inspector enquiring mother said child had had mumps; doctor was called in and certified scarlet fever. G had a rash, was not ill nor kept from school; 8 days later a brother had scarlet fever, doctor called in and certified both cases. Even without definite negligence obscure cases will at times give trouble:—All three children in a house had scarlet fever at intervals of 20 and 3 days, each case being promptly removed to hospital; then it was found that a young servant had had a sore throat six days before the first child was taken ill, and she had been, and was then, peeling. A doctor saw a boy with presumably indefinite symptoms, saw him again a week later; eleven days later the boy was taken to the doctor and found peeling; meanwhile a child had played with him and got scarlet fever.

THE USE OF ISOLATION HOSPITAL ACCOMMODATION FOR PULMONARY TUBERCULOSIS.*—During a part of the year the vacant accommodation at the Sanatorium (St. Helens) was utilized for the isolation and treatment of cases of phthisis. The object aimed at has been to place the patients in such circumstances that at any rate a partial recovery may be facilitated, and at the same time to teach them such simple hygienic measures as can be carried out in their own homes. A large pavilion was set apart for the purpose, the windows of which were kept open night and day, so that the patients might be taught the harmlessness of fresh air. The patients were specially instructed in the manner in which the expectoration was to be dealt with, and they became accustomed to the use of the pocket sputum bottle. It was mostly advanced cases of the disease that were admitted, but remarkable improvement was noted in many from the new hygienic conditions, the more severe constitutional symptoms became abated, the cough and spit became much diminished, the physical signs improved, and many began to gain in weight. The symptoms of improvement had a marked educative effect on the patients treated, and encouraged them in the continuance of the régime, and although several have relapsed since their discharge from hospital into their old habits, yet in others some permanent improvement has been carried out, both in arresting the disease in the sufferer himself and preventing its spread.

* From Dr. Buchan's Annual Report, St. Helens, 1903.