NOTES ON AN EPIDEMIC OF GERMAN MEASLES.

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The following notes are founded upon the observation of over 200 cases of German measles, occurring among the garrison of the Aldershot Command during the months of February, March, April, May and June, 1913. Although this disease is of a comparatively trivial nature, it causes a good deal of inconvenience, owing to its extreme infectiousness among young adults, and is frequently somewhat difficult to differentiate from measles and, more rarely, from scarlet fever. The descriptions found in text-books vary very much, and are seldom satisfactory. I found, however, the account of the disease given in Dr. C. B. Ker's "Practical Text-book of Infectious Diseases" extremely helpful.

As the essential point in dealing with this affection is to make an accurate diagnosis, the object of this short paper is to give some assistance in making a differential diagnosis. As both measles and German measles were prevalent at the same time in the same units of the Aldershot garrison, this was not always an easy matter.

Invasion Period.—As a general rule the patients had felt out of sorts for one or two days before the appearance of the rash. The usual complaint was of pains in the limbs, slight headache and slight sore throat. A few complained of stiff neck, and a considerable number volunteered the information that they had noticed the glands of the neck enlarged. Many stated they thought they had caught a slight cold, but catarrh was never a prominent symptom. In a considerable number of cases the first thing that made the patients think there was something the matter with them was the appearance of the rash.

Rash.—The appearance of the rash varied considerably according to the stage at which the patient came under observation. If seen early, the rash consisted of rose-pink papules, first appearing on the face, the upper part of the chest and neck, and spreading over the body and limbs. Sometimes the rash remained papular till it faded, but frequently it became a diffuse, smooth erythema, not unlike the rash of scarlet fever. Even when the rash had become erythematous on the trunk and thighs, a papular rash was still to be found on the legs and feet. Itching was not complained of. The rash remained visible for two or three days. In a few cases a slight branny desquamation was noticed on the face and neck, but I never noticed any desquamation elsewhere.
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Temperature.—In most cases there was a slight rise of temperature, not exceeding 101°F., and lasting only for one or two days. In a large number of cases, especially towards the end of the epidemic, the temperature was normal throughout. In two cases the temperature reached 104°F., and in two cases, 103°F. The patient’s general condition in these cases was good, he did not look at all ill, and said he felt well. In ten cases the temperature reached 102°F.

Glandular Enlargement.—The posterior cervical glands were found more or less enlarged in all the cases. In a few cases the posterior auricular and sub-mental glands were enlarged. In two cases the posterior cervical, posterior auricular, sub-mental, axillary, and inguinal glands were all enlarged. Many of the patients stated that the cervical glands became enlarged before the rash came out. The enlargement was painless, or practically so, as most patients had not noticed it until pointed out to them.

Eye Symptoms.—There was no swelling of the eyelids, mucopurulent secretion, or pronounced redness, but a pink appearance of the conjunctiva was a characteristic sign.

Tongue.—The tongue was often normal in appearance. Sometimes it was coated with a thin white fur, but it was never thickly coated, nor was the breath offensive. In this respect there was a marked difference between cases of German measles and measles, a very dirty tongue and an offensive smell from the breath being usually present in measles.

Buccal Mucous Membrane and Throat.—The soft palate was usually congested, showing patches of a brick-red colour, and the fauces slightly red, but the buccal mucous membrane generally was normal in appearance as a rule, in exceptional cases it showed slight pinkish congestion, but never the dark red or purplish hue commonly seen in measles. Koplik’s spots were never seen, though every case was carefully examined for them. All cases in which Koplik’s spots were detected turned out to be cases of measles.

Complications.—There were no complications. After a couple of days the patients felt quite well, had recovered their appetite, and wished to be up.

Diagnosis.—The chief difficulty in diagnosis consists in the confusion between this disease and measles. A case seen in the early stage is often difficult to distinguish from a mild case of measles, and a large number of cases sent to hospital as measles turned out to be German measles. In a smaller number of cases the opposite mistake was made, cases of measles being sent in as German measles.
The chief points to be attended to in forming a diagnosis between measles and German measles are the following: German measles is a much milder disease than measles. The patient does not look ill, the preliminary symptoms are slight, and even if the temperature is high, the general condition is in contrast to the amount of fever. The catarrh in measles is much more severe, the eyelids are swollen, and the conjunctivæ of the lids deeply congested. The glandular enlargement is constantly present in German measles, and only occasionally in measles. The buccal mucous membrane is more congested, and of a darker colour in measles than in German measles. Koplik's spots are never found in German measles. This is a most important sign, and is especially useful when a mild case of measles comes under observation just as the rash is beginning to appear. These are the cases that are readily mistaken for German measles; but if Koplik spots are found, the case may be at once diagnosed as measles. Though the early rash of measles may be difficult to distinguish from the rose rash of German measles, it soon becomes darker in colour, and shows a bluish-red, or purplish, tint which the rash of German measles never assumes. The diagnosis of German measles from scarlet fever should seldom give rise to difficulty, though if a case of German measles be not seen until it has reached the stage where the rash has become erythematos, it may be mistaken for a mild case of scarlet fever. If the whole body be stripped and carefully examined, it will be found that in the case of German measles a rose-red papular rash can still be seen on the lower parts of the limbs, even when the rash on the trunk has become erythematous—the erythematous rash of German measles is smooth, not punctate. Other points of difference are that in German measles the "pink-eye" appearance is characteristic; there is no circum-oral pallor, the congestion of the fauces is less definite than in scarlet fever, and the tongue is normal, or only very slightly coated, and no prominent papillæ are seen.

Two cases of scarlet fever and two of urticaria were sent in as German measles.

EVIDENCE THAT GERMAN MEASLES IS A DISTINCT DISEASE.

The specificity of German measles is now generally accepted; but the following cases are of interest in showing that German measles confers no protection against measles or scarlet fever, and vice versa. I may mention that out of 163 cases of German measles in which special inquiry was made on this point, 100 had previously suffered from measles.
Driver G., A.S.C., was admitted to hospital on January 4, 1913, suffering from a severe attack of measles. He recovered, and went back to duty. On April 3, he was readmitted to hospital suffering from German measles.

In the following two cases measles and German measles developed concurrently:

Private K., Hampshire Regiment, was admitted to hospital on April 8, 1913, suffering from German measles. On April 13, while convalescent from German measles, he developed a very severe attack of measles, complicated with broncho-pneumonia.

Gunner M., R.F.A., was admitted to hospital with measles on April 18, 1913, and developed German measles on April 22.

In the following cases the patients appear to have exchanged diseases. They were acquaintances belonging to the same unit, and subsequent investigation showed that they had, contrary to orders, had communication with each other in the hospital grounds:

Driver Lt., A.S.C., was admitted to hospital with German measles on March 24, 1913, and developed scarlet fever on March 31.

Driver Jr., A.S.C., was admitted to hospital with scarlet fever on March 10, 1913, and developed German measles on April 4.

Necessity for Isolation and Disinfection.—German measles, as it presented itself in this epidemic, is such a trivial affection that the question suggests itself whether it is worth while to isolate and disinfect. The disease is undoubtedly very infectious in its early stages, though I doubt very much if the infectivity persists after the acute stage is over. I am not aware of any evidence that infection is conveyed by fomites, and I doubt very much if the disinfection of bedding and clothing is necessary.

I find it stated under the heading "Rötheln" in Bischoff, Hoffmann, and Schiening's "Lehrbuch der Militärhygiene," vol. ix, 1912, that "special measures of disinfection and isolation are not necessary." Of course if German measles were treated without measures of isolation, it would be necessary to be very careful in diagnosis, lest any cases of measles or scarlet fever should be mistaken for German measles, and so escape being isolated.

The conclusion to which my experience of the disease would lead me is that the first cases appearing in a station, or sporadic cases, should be isolated in the hope of aborting an epidemic, but that once the disease has attained epidemic dimensions, the trouble and expense of isolation is not repaid by the results obtained. In very few cases is hospital treatment necessary in the interests of the individual; and as the disease is specially infectious in the very early stage, it is doubtful if isolation has much effect in controlling its spread.