REMARKS

ON

EPIDEMIC ROSEOLA; ROSELLA, ROSALIA, OR RUBEOLA.

By WILLIAM SQUIRE, L.R.C.P.Lond.

THE term "roseola", if restricted to the symptomatic rose-rash by definition not contagious, would be inapplicable to the exanthem now epidemic. When, some ten years ago, attention was called to the prevalence of this form of eruption by the late Dr. Babington, under the name of Rubeola Notha, rubeola had become with us such a general medical term for measles, as to necessitate the suffix *vobus*. We, not having different popular names, like the German R $\ddot{o}$ theln and Masern, to apply to these two diseases which have great outward resemblance, and coming to the observation of this one under such names as false measles or secondary measles, were slow to recognise it as a distinct exanthem, and became unsettled in our views of the more serious malady. Had the points of distinction between the two been more closely investigated, we might have established for this, under the name of rubeola, the independent place it claims among the exanthemata, and have restricted to measles the one scientific name, morbilli, by which alone it is designated in the nomenclature of diseases of the College of Physicians.

Rubeola, then, though the correct appellation for this exanthem, cannot at present be applied to it in this country without perpetuating that confusion of it with measles which leads to error in our estimate of the malady under treatment, and of its protective influence; meanwhile, let it be considered as the equivalent of the popular roseola, which has only of late been appropriated by the dermatologists, and is either used by them with a prefix to denote the special meaning it is to bear, or, when spoken of in more general terms, is evidently made to include this disease, the proof of contagion being absent: in this sense it has also been termed rosella. When the evidence of contagion was obvious, it has either been described as *rubeola sine catarrho*, or as an ailment with symptoms intermediate to those of measles and of scarlatina, and then called rosalia. This name seems to have been applied both to measles and to scarlatina, and is, therefore, objectionable. It appears in an enlarged edition (1839) of Hooper's *Medical Dictionary*, whence is abstracted the following account of roseola.

"It is distributed into several small patches, of various figures, but larger and more irregular forms than in the measles. It is at first red, but soon assumes its deep roseate hue. The fauces are tinged with the same colour, and a slight roughness of the tonsils is felt in swallowing. The rash continues vivid through the second day; after which it declines in brightness, slight specks only remaining, of a dark hue, on the fourth day; which, with the constitutional affection, wholly disappear on the fifth."

The only correction required here to make this description applicable to the various appearances of the eruptive disease in question is, first, the great and important fact of its being contagious; and, secondly, that it is not usually distributed into separate small patches. Parts of the skin are successively affected, and present discrete, rose-red spots: these are not generally aggregated in the way peculiar to measles; and, though the part of the skin which they occupy is more or less turgid, separate bright red spots are sufficiently prominent. The period of incubation proper to this disease is a long one; at least eight or ten days, or even a longer time, may elapse before a second case declares itself; and this, together with the frequently trivial nature of the ailment, may account for the influence of contagion being overlooked.

In the majority of cases it would not be easy, perhaps hardly possible, to pronounce, from the appearance of the rash alone, that measles was not the disease present: indeed, it seems to have much the same close relationship to measles that chicken-pox has to small-pox. The period of incubation is the same in each; the points of distinction are also similar. The one great distinguishing mark between this disease and measles is, that the eruption appears on the first day of illness, always within the first twenty-four hours, and not after the two or three days of severe ailment so well known to precede the more serious disease. There is also, besides the less simultaneous appearance of the rash, the slighter amount of accompanying disturbance, so that a child kept to his bed, as he ought to be for the first day or two of this affection, is

cheerful and lively, instead of oppressed or suffering. Very often the first symptom of illness noticed is the rash; but in some cases heaviness and coryza have given warning of its appearance. Giddiness has been the earliest symptom in a very marked manner on two occasions; in a girl of 17, at church, who had the rash early next morning; and in a boy of 13, who, nearly falling in his class at school, had a most conspicuous eruption, with fever, temp. 102°, the same evening: both these cases had previously had measles. In other instances occurring in persons old enough to give an account of their symptoms, sore-throat and a feeling of roughness in swallowing have been first felt, then some aching of limbs—not enough to prevent sleep—and by morning the rash in the front of the chest, sides of the neck, and perhaps the face, have caused some astonishment on waking.

Fulness of the tonsils, with slight enlargement of the glandulæ concatenatæ in the neck, have always been noticed. Sometimes, but rarely, specks of white, or greyish ulcers, have formed on a more than usually enlarged tonsil; and then some considerable enlargement of one of the upper cervical glands has occurred and persisted till the small ulcer has healed, which it generally does by the fifth day, when the rash also disappears, if it have not already considerably faded. Exposure to cold does not, after this, cause its reappearance. Where complete rest and warmth have not been enjoined at the commencement of the rash, considerable discomfort and some difficulty have been experienced from redness of the throat, which, though it also has subsided on the fifth day, yet has left so much subsequent debility as to show how easily a more serious form of illness than that usually met with may result.

Besides the throat-affection, always to be found on examination, though not complained of, there is also turgescence of the conjunctiva even if there be no coryza. This at first is chiefly of the palpebræ; but often, on the second day, there will be seen a pencil of vessels running across the globe to the cornea. The appetite is not impaired; there is not only no subsequent catarrh, but no pulmonary complication has been met with.

The highest temperature has coincided with the first appearance of the rash; that is to say, it has been found to occur on the first day of illness, when the patient, as rarely happens, has been seen on that day. Once only has it been found to exceed 102 deg. Fahrenheit. On the second day, the temperature is frequently found at 100 deg.; once only, in the case last given, 101 deg. in the axilla. It may sometimes be 100 deg. on the third day, generally 99 or 99½ deg. On the fourth day, it may be at 99 deg., or it may have already subsided; by the fifth day, subsidence is complete.

The intensity of contagion is less than in measles. Where more than two children occupy the same room, it is generally the one in the next bed that first takes the complaint, and is ill with it ten days afterwards. In one such case, a third child in the room escaped until another, ten days after the second, and then, more free intercourse having been permitted, three other children of the family were attacked. Where it has been contracted at day-schools, a child has been kept away a few days or a week, and, soon after the return, ten or twelve days from the first seizure, others have fallen; the same thing has happened when the child first affected has not returned to the school. Last Easter, a boy attending University College School was at home for the holidays; he complained of being tired on April 2nd. On April 3rd he had the rash, and was secluded on that day and the next. On April the 18th, two sisters, aged 17 and 16, at home with him, had giddiness, felt tired at night, and had the rash. One had left home on a visit on April 15th. A younger sister, not quite three years old, who associated less with the elder children, had well-marked rash on the 20th, with less coryza and less marked symptoms than the elder children, though they had had measles and she had not. On Nov. 16th, a little girl at a day-school had to go home with rash. On the 22nd she returned; and a schoolfellow who had been on very affectionate terms with her was kept away, fearing it was too soon for her safely to mix much with her friend, as she had not had measles, which it was supposed to have been. On the 28th she had cough, and seemed ill. On the 29th she was seen by me, with a rash out, thought not to be measles; she had no cough, and was cheerful. The temperature in the axilla that day and the next was 100 degs.; signs of the rash were still visible on the chest and neck. On December 1st, it had also appeared on the arms and legs. On December 2nd, the rash had nearly disappeared, and the temperature was down to the normal. The mother of her friend visited her, and said the rash and illness seemed to be exactly what her own little girl had had. On December 13th, a sister, sleeping in the same room, was heavy and had signs of rash the same evening. Two cousins, aged 17 and 19 respectively, who had come to spend a few days, were sent home; the elder had sore-throat on December 23rd, and the rash fully out on Christmas Day; the second, who occupied the same sleeping room, was taken ill on Jan. 3rd,

and had the rash out on the 4th and 5th. A younger sister of the child taken ill on December 13th, was seized on December 22nd, and had the rash very full for three days, with no subsequent ill effect. Two still younger sisters were consecutively affected. These children had not had measles, the two cousins had. The case of the boy first mentioned is interesting, in that he was the only one of his family who had had measles; his two younger sisters who had caught this epidemic roseola, at a day-school some months before, and continued at home, escaped all subsequent illness, though the brother had, of all the cases observed, the attack most resembling measles, with high fever, and that disagreeable odour on entering his room before ventilation had been seen to, which is so often noticed in that disease. A girl who had the rose rash took measles afterwards with the rest of the family; and, on two brothers, a year afterwards, returning from a preparatory school with the epidemic roseola, she escaped, while her sister took it, and had, besides, sore-throat and considerable hoarseness of voice.

The appearance of the rash on the second day, and the accompanying soreness of throat, may give rise to a superficial resemblance to scarlet fever; but the skin, though sometimes a little red, and somewhat swelled between the characteristic rose spots, has not the diffused redness indicative of scarlet fever. The appearance of the throat and tongue, especially in the second and third days, is also distinctive; and there is more fear of scarlet fever in its slighter form passing unrecognised altogether, than of being mistaken for this disease.

The question of a mixed disease, intermediate between measles and scarlet fever, is easily disposed of. Supposing an individual to be exposed simultaneously to the two influences, the period of incubation of scarlet fever being shorter, that must necessarily appear first; and the rarity with which it is known to be followed by measles looks as if there were some antagonism between these two diseases. Moreover, even in two diseases of nearly the same incubative period, such as measles or mumps, when a lad is exposed, as is frequently the case in large schools, to both influences at once, he takes the measles, with its somewhat shorter incubative period, first, and the mumps has to wait till that is over, even appearing as late as three weeks after exposure to its cause.

It will be evident from cases given above, that the exanthem in question is a specific disease, having its own natural history and laws, protective against a recurrence of itself, but in no way modifying an attack of measles, nor giving an immunity from it. It would also seem probable that the rtheln or rubeola of Vogel and the Germans is identical with this, and that we have not two, but one, exanthem only under our notice.

THE ADMINISTRATION OF CHLOROFORM AND OF OTHER ANÆSTHETICS.*

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IN reference to remarks on this subject made on page 617 of this JOURNAL, December 4th, 1869, I may be permitted to state that, from my case-books at Guy's Hospital, the following statistical results have been obtained.

1. From February 2nd, 1862, to December 10th, 1869, chloroform was administered at the operating theatre of the Eye-Department of Guy's Hospital to 3,224 patients (to 275 in 1862, to 297 in 1863, to 245 in 1864, to 385 in 1865, to 437 in 1866, to 639 in 1867, to 503 in 1868, to 443 in 1869).

2. Nitrous oxide gas was given (for the first time on November 30th, 1868) to 26 patients.

3. Sulphuric ether (with Keith inhaler) to 3 patients.

4. Bichloride of methylene (given like chloroform) to 16 patients.

5. Bichloride of methylene (given as shown to me by Mr. Wood) to 204 patients.

6. Bichloride of methylene first, followed by chloroform, to 10 patients.

Total number (up to December 10th, 1869) of anæsthesised patients, 3,483. This number only includes the patients operated on in the operating theatre of the Eye-Department. Though not one death has occurred among the number, it should be stated that a feeling of unsafety was experienced at the administration of the anæsthetic in every case.

Preliminaries.—Only those given under 4 (page 617) were attended to. Every patient was operated on in the recumbent position, on his back, the neck and chest being free and well exposed. The chloroform, in all cases, was administered with an inhaler, which originally was Snow's, but which, in course of use, had undergone many simplifica-

tions; it is made by Weiss and Son, of 62, Strand, London. Besides watching the patient's cheeks, lips, etc., attention should be paid to the colour of the blood which flows; if this turn black suddenly, the chloroform or methylene should be removed. The patient, when struggling, should *never be resisted*; he should be allowed to do so while continuing to give the anæsthetics.

Signs of Danger.—Among the 3,224 chloroform cases, 45 are reported as having become blue in the face and stertorous suddenly, with the breathing and pulse irregular; 7 are stated to have become pale suddenly, with respiration and pulse stopping (to several is affixed the remark "apparently dead"). In all these cases the chloroform was removed at once, and the patient *slowly and gently turned on his left side*, to cause the region of the heart and the left side of the face to rest upon the couch. Experience has shown that this turning the patient should be done *slowly and gently*. Whether the support given to the heart or a change of position of the tongue, or some other change, be the cause of the cessation of the dangerous symptoms, I can not say. During the many struggles with patients in danger, the fact of rapid recovery of patients when placed on the left side was observed accidentally. For the last six years it has been the sole means adopted in cases in danger; the administration of chloroform, the patient resting on the left side, was resumed as soon as the respiration had become strong and regular.

REMARKS.—No accidents of any kind have yet occurred with the nitrous oxide gas or the bichloride of methylene. The latter is of late used almost exclusively; it causes sickness, perhaps, in one out of thirty cases, turgidity of the face rarely, and anæsthesia, if properly given, in from twenty to forty seconds. Mr. Rendle was the first to administer the bichloride of methylene at the Eye-Department of Guy's. He gave it like chloroform; no sickness was expected to follow. The sixteen patients upon whom it was tried were very troublesome, difficult to get under its influence; many were sick. Its use was therefore discontinued.

In January 1869, my attention was drawn to a new mode of giving the bichloride of methylene by Mr. Couling of Brighton, who informed me that Mr. Wood of Carlisle House, Brighton, had been the first in his town to give it in this manner. Mr. Wood, with his usual kindness and liberal spirit, showed me, on patients of his, this new mode of administration. Within a few seconds after the administration (the patients in the sitting posture), I saw him extract teeth, etc., without the patients showing any signs of pain. Watching their eyes during the operation, I saw them moving continually; but, on touching them, found them in a state of anæsthesia. This fact of the anæsthesia appearing sooner than the loss of the power of motion, had been overlooked in our former experiments with bichloride of methylene. The same day I administered the bichloride of methylene, as shown to me by Mr. Wood, in London, and have continued to do so ever since. It seems, in eye-surgery, to fulfil the objects of an anæsthetic most thoroughly. I have to thank Messrs. Rendle, Villiers, and Saunders, assistants at the eye-department, for their ingenious suggestions towards the improvement of the inhaler. At present it consists of a cylinder of thin card-board, about ten inches long, about four inches in diameter, with a round opening, about one inch in diameter, in each side. The cylinder is lined with flannel, and open at each end. It should fit accurately over the mouth and nose of the patient. Two sizes (one for children and one for grown people) are in use. A flannel bag, about six inches long, is fixed with an elastic round that end of the cylinder which comes to lie next the face. For a child, half a drachm, for a grown person one drachm, of good bichloride of methylene, is poured into the flannel-bag which hangs within the cylinder. The patient being told to breathe quickly and deeply, and not to mind a feeling of suffocation, the inhaler, charged with the bichloride of methylene, is tightly applied over the mouth and nose, and the palm of the hand over the opposite end of the cylinder. Thus all air is excluded, except what may pass through the round openings in the sides of the cylinder, and what is in the cylinder at the time when the bichloride of methylene is poured in. At the moment when the inhaler is applied, I commence counting; having counted slowly up to thirty or forty (equal to about thirty or forty seconds), I find, as a rule, on touching the eyeballs, that they are insensible. The operation should then be commenced at once.

The anæsthetic effect of one drachm of good bichloride of methylene, as a rule, lasts from two to five minutes—sometimes longer. Another half drachm is given if its effect cease before the operation is completed. The patient, as soon as consciousness returns, is generally able to walk out of the operating-room.

It must be borne in mind that the above remarks apply to operations on the eye, which are naturally of short duration, mostly from one to three minutes.

* The above remarks, being supplementary to those published by others at page 617 of last volume, to avoid incoherence, should be read together with the latter.