NOTES
OF
A CASE OF
PETECHIAL COW-POX,

WITH OBSERVATIONS ON THE DEVELOPMENT OF THE
HÆMORRHAGIC DIATHESIS.

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THE occurrence of petechiæ and hæmorrhages, as a symptom in certain of the febrile exanthemata, especially the small-pox taken naturally, has been known to physicians from the earliest periods ; and occasionally, though very rarely, the same phenomenon has been observed when the small-pox has been excited artificially by inoculation. But so far as my reading extends, no instance has yet been recorded of the same condition of the fluids being excited by the insertion of the vaccine virus. The following case, therefore, appears worthy of being submitted to the notice of the Society.

On Thursday, May 19, 1842, Mary Ann Webb, aged four years, a fine child, residing with its parents, at No. 8, Euston Mews, Euston Square,

was vaccinated at the Small-Pox Hospital, by Mr. Marson, in five places on the left arm. The child was at the time apparently in perfect health. Her brother James, aged six, and her sister Jane, aged one year and a half, were vaccinated at the same time. The lymph for all the three children was supplied from the same source, an unexceptionable eighth-day vesicle.

On Sunday, May 23rd, the mother first perceived that the arm of the child Mary Ann presented some unusual characters. It appeared to her more inflamed than the arms of the other children, and she noticed at the same time some spots on the child's face. The child, however, made no complaints, and in all other respects enjoyed its usual state of health. On Thursday, May 6th, being the eighth day, the child walked to the hospital and back without feeling fatigued. The vesicles on that day appeared dark, as if filled with blood; the areola was of a mahogany colour, obviously from ecchymosis; and numerous petechiæ were dispersed over the whole body, more especially the face, neck, and arms. There were several patches of ecchymosis on the tibia. The child's appetite and sleep were unimpaired.

On the following day, Friday, the 27th May, I first saw the child. The outer portions of a large areolous circle had assumed a yellowish tint, while the inner portions were still of a dark mahogany colour. The vesicles themselves were jet black. It was obvious that there had been extensive ecchymo-

sis around the incisions, which was in process of absorption. The petechiæ over the body were numerous. On the left temple there was a very large extravasation of blood, owing to a slight bruise which the child had received. There had been some bleeding from the left ear, and a few drops of blood had escaped from the nostril. The child's general health was good. The bowels had acted freely from medicine taken the preceding day. No blood was perceptible in the motions.

The brother and sister of the child were passing through the cow-pox in a perfectly normal manner.

Dr. A. Todd Thomson, Dr. Quain, Mr. Davis of Hampstead, Mr. Porter, and other gentlemen, visited the child on this and the three succeeding days. The ecchymosed state of the arm, and the petechiæ, declined with the decline of the cow-pock. On Friday, June 3rd, (the sixteenth day of vaccination,) all hæmorrhagic appearances had ceased. Two scabs had fallen off, leaving good cicatrices. Three others, hard, and of a jet black colour, still adhered. The child was in perfect health.

On inquiry into the history of the child, I learned that it had cut some of its teeth with fits. In other respects the child had exhibited no symptom of constitutional weakness. It had not passed through either measles or scarlet fever, and had never suffered from any serious disease.

There cannot, I apprehend, be any doubt that the hæmorrhagic diathesis had, in this case, been developed by the agency of the morbid poison inserted

into the arm. The previous health of the child, the appearance of the petechiæ on the fourth day of the vaccination, and their decline on the sixteenth, forbid the assumption that there was here an accidental coincidence of cow-pox in a previously unhealthy condition of the fluids. This direct effect of the vaccine poison upon the blood may teach us to judge of the influence exerted by cow-pox under ordinary circumstances upon the circulating mass. It affords a key to explain the more recondite phenomenon of anti-variola power.

Of all the sources of the hæmorrhagic diathesis, by far the most common is the action of a morbid poison. There is scarcely a morbid poison known which has not developed it. Small-pox, scarlatina, the typhoid miasm, the pestilential miasm, the miasm of yellow fever, the bite of the rattle-snake, are all occasionally, though in variable degrees of frequency, accompanied with petechiæ and hæmorrhages. It is even probable, that many cases described as idiopathic purpura, are, in reality, the offspring of a morbid poison. Some years ago, a policeman was admitted into the Fever Hospital with petechial fever, supposed to be idiopathic, and died the following day. Ten days afterwards a second policeman from the same division was received into the Small-pox Hospital with petechial small-pox, and died at a very early period of the eruption. The two men had been in communication, and little doubt can be entertained that both were suffering under the effects of the variolous poison,

undeveloped in the one case, and partially developed in the other.

The extent to which a morbid poison, in its highest state of intensity, can deteriorate and impart this singular hæmorrhagic disposition to the blood, is quite wonderful. On the 22nd February, of this year, I was requested by Dr. Leonard Stewart to see, in consultation with him, a lady, thirty-two years of age, vaccinated in early life, who was then labouring under petechial small-pox. She died the same evening. Her whole body was of the colour of indigo, and my first impression on seeing her was, that she was a native of Africa. In this most remarkable case, the mental faculties were quite unaffected. Within a few hours of her death, she conversed with the utmost composure. A like freedom of the brain and nervous system occurred in the case of petechial cow-pox now under consideration, and it is, I believe, a common attendant on the hæmorrhagic diathesis. It would appear therefore, that this singular condition of the blood is attributable, in a great measure, if not altogether, to the direct agency of the poison on the mass of circulating fluids, and is independent of the brain and nervous system.

It may reasonably be presumed, that if, in the instance before us, the child had been inoculated, or had taken the small-pox casually, in either case the hæmorrhagic diathesis would have been developed, and life brought into imminent hazard. It is exceedingly rare to witness recovery from the com-

plication of small-pox, in the unprotected, with the petechial tendency, and generally when small-pox invades the vaccinated, the petechial form proves fatal. Nevertheless, I have seen two or three cases of recovery under such circumstances. The mitigated form which the hæmorrhagic diathesis assumed in the vaccinated case, the subject of the present paper, may perhaps have been owing to the mode in which the generating poison gained access to the system. I know no reason why the cutaneous mode of reception should not mitigate this as it does the other better-known effects of a morbid poison.

It will be very interesting to ascertain if this child, when hereafter attacked by measles or scarlet-fever, should be thrown into the hæmorrhagic state, or whether it be the vaccine poison alone which has this peculiar effect upon the child's blood. I have requested the mother to communicate with me in the event of the child's being so affected. Considering the normal cause of the other vaccine phenomena, I presume that the vaccination has been *effective* in this case, and that the occurrence of small-pox need not be dreaded. It will yet be highly interesting to follow out the history of the child, and to ascertain, should it ever imbibe the variolous poison, in what form and under what modifications the disease develops itself.

It may not, perhaps, be irrelevant to notice the important distinction that subsists between cases of petechial small-pox and those wherein the vesicles generally or partially fill with blood from the vio-

lence of the local inflammatory action. The latter I have frequently witnessed, but the former are very rare: of the many thousand children whom I have seen under vaccination, the present is the only instance I have seen of true petechial cow-pox. That similiar cases however have occurred to others I cannot doubt. Mr. Gardner, of Great Portland-street, a very intelligent practitioner, saw a case of this kind some years ago in Westminster. In the Museum of Guy's Hospital, there is a wax model, (No. 2,705,) described as "The arm of a young man affected with purpura, consequent to vaccination." I have examined this preparation, and find it to be altogether different from the case now described. The eruption is of an anomalous character, in large circular patches, and the vaccine vesicles are not filled with blood. I would rather characterize this as a case of "adult vaccination performed in a very unhealthy state of the system."

It only remains for me to state, that a drawing of the appearances on the arm, on the ninth day of vaccination, was taken, under the direction of Dr. A. Todd Thomson.