ON ACCIDENTALLY SPURIOUS OR IMPURE, AND EFFETE OR IMPERFECT, VACCINATION.

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VACCINATION, properly performed, being doubtless the greatest boon, in a protective sense, against small-pox that has ever been conferred upon humanity, it is with much reluctance that I proceed to make any statement which may point to accidents attending its inefficient performance upon a few rare and exceptional occasions. Yet, the late instances of what, I fear, must be pronounced vaccino-syphilis, as detailed by my friend Mr. Jonathan Hutchinson and others, render it imperative that, in addition to the few remarks which I made at the late meeting of the Royal Medical and Chirurgical Society, which have been misinterpreted, I should submit to the profession, a little more in detail, my experience attained during the past thirty years at the Hospital for Skin Diseases, Blackfriars, where at least 120,000 registered cases of every variety of cutaneous disease have passed under my care and treatment.

It may be necessary to premise, that opportunities of witnessing the arms of the vaccinated earlier than a month or six weeks after vaccination, have been comparatively rare; consequently, it is chiefly when the secondary or tertiary eruptions become manifest at this or later periods, that the cases have been brought under observation. The question, therefore, whether the supposed vaccine vesicle presented the characteristics of a chancre or not, in the rare cases wherein syphilitic eruptions have been manifested, cannot be decided by my evidence; but in the more frequent occurrence of contagious porriago and other concomitants of spurious vaccination, the purulent and extended condition of the vaccinated points have been constantly apparent, even for months after vaccination, in addition to ulcers, glandular enlargements, and pustules in the vicinity of the punctures and on other parts of the arm or body of the patients. Spurious or impure vaccination was known and pointed out by Dr. Jenner, as cited by Willan and Bateman. In Bateman's *Synopsis of Cutaneous Disease* (7th edition, page 312 *et seq.*), three varieties of irregular vaccination have been noticed, viz., "pustules, ulcerations, and vesicles of an irregular form." These were referred, both by Dr. Jenner and by Willan and Bateman, to the accidental presence of cutaneous eruptions in the vacciner; for example: "herpes, psoriasis, impetigo, lichen, and, most frequently, certain varieties of porriago have been present." Dr. Willan also thinks "that the itch and prurigo likewise have the same influence." Baron Alibert, as also stated by Bateman, page 227, mentions "the case of an infant who was inoculated with crustea lactea, and took it." This, of course, was the contagious porriago of infants. There is, however, no mention of syphilitic infection in any of these authors, although there appears some supposition of it, and also of scrofula. Consequently, such infection, if existing, and if unknown to such authorities, must indeed be rare if, amongst the numbers of infantile eruptions which it has been my lot to witness in this vast metropolis, I can only suppose that I may have seen thirty instances in thirty years.

My experience leads me to believe that by far the most frequent cause of spurious or impure vaccination, is the contagious porriago of infants, and, indeed, of adults; the next is probably herpes, chiefly seen amongst adults; the next, scabies; the next, also more frequent in adult life, pityriasis versicolor; and, finally, a congenital taint of syphilis in the vacciner, which is probably communicated rather by the blood than by the lymph. This last source is more difficult than any other to determine with the accuracy which the importance of the decision demands—so uncertain is it whether the eruption is the result of a congenital or of an inserted taint. In justice to myself, I must say that I made every possible inquiry when a suspected case of vaccino-syphilis came before me; and if I erred, it was rather a misfortune than a fault.

With regard to the other forms of spurious vaccination above mentioned, there has commonly been no difficulty in tracing them to their source. In illustration, the following examples, occurring in my private practice during the last few weeks, may be cited. As far as possible, all observations will be limited to cases attended or seen in consultation with brother practitioners, to whom anonymous reference only can be made, as the request to publish names has been withheld. Of porriago, at least half a dozen cases have presented themselves within the last two months, the examples being, for the most part, sequences of secondary or tertiary vaccination.

About six weeks ago, I received a visit from a gentleman residing at Wimbledon, who showed me some pustules on his arm and body, which, he feared, arose from syphilitic vaccination. He stated that

several members of his family, and others in the village, including the wife of his medical man's partner, were also suffering in the same way; and he begged me to proceed forthwith to Wimbledon to meet Mr. —, who kindly informed me that, "two or three weeks ago, with lymph procured from London, he vaccinated several of the family to which I was called, and from them some others in the neighbourhood; and that a pustular eruption had appeared on several of the vaccinated, which had caused considerable alarm." The patients whom I saw in this family consisted of the gentleman and his wife, a daughter about 11 or 12 years of age, and the governess. In every case, the appearances were similar—flat, irregular-shaped pustules, not only on the vaccinated points, but in different parts of the body; and in some places where dressings had been used, appearances of ulceration or suppuration, or thick and somewhat raised scabs, were manifest. In the little girl, some accidental febrile excitement was present; but in the other cases, excepting needless alarm, the external symptoms alone claimed attention.

A nearly identical case in two young ladies, Misses B., aged 8 and 11, residing at Kilburn, I saw on May 9th, in consultation with Mr. Nayler. Pustules, instead of the vesicles, appeared on the ninth or tenth day, attended by other pustules on the vaccinated arms, and also on the face and fingers of the elder young lady, who had also an enlarged gland in the axilla and neck. These children were vaccinated by their usual medical man, who desires to withhold his name.

It should be observed that the above examples, in each instance, were secondary vaccinations, as also is the last now detailed, occurring on the 9th of the current month. Mr. H. B., aged 20, residing at Woodford, applied to me, suffering severely from pustules and boils on many parts of his arms and body which had made their appearance a few days after vaccination, performed six weeks previously. These eruptions had resisted the ordinary treatment, and seemed to increase rather than diminish, preventing his return to college, and, indeed, his enjoyment of life, owing to the supposition that it was an impure disease. All these cases yielded, in short periods, to the external use of parasiticides, and to tonics consisting of syrup of iodide of iron, in combination with aperients and vegetable bitters.

The next instance to be adduced is a case of scabies in two youths, H. and E. G., aged 16 and 14, residing in the Edgware Road, who were seen May 16th, in consultation with Mr. Nayler and myself. Secondary vaccination was performed upon them and their two sisters two months ago. About the fourth day after the operation, the elder boy broke out in an inflammatory rash, commencing on the vaccinated arm, which Dr. — regarded as the efflorescence that often attends vaccination in youthful subjects. The symptoms, however, increased, and gradually extended over the entire body, whilst the vesicles on the arm assumed an irregular shape, and became quickly purulent, according to the mother's account, who accompanied them. The two brothers habitually slept together; and, about the eighth or ninth day, the rash appeared on the younger boy, who, in a short time, became as severely affected as his brother. Mrs. G., the mother, then put them into separate beds; and Dr. — administered what he deemed appropriate remedies. The symptoms, however, increased, and the youths were brought to me two months after the vaccination, presenting as well marked instances of papular scabies as could be seen. No other members of the family, or any friends, had or have any kind of eruption; nor, on inquiry, does either boy appear to have been away from home, or exposed to any contagion; nor have the younger sisters caught the infection. For the following details, I am indebted to the mother and to the patients themselves, who seem gifted with the quickness and intelligence often found in young London tradesmen. They say that "vaccination was performed with lymph taken from two glass tubes; one served for the two brothers, who took the contagion; and the other, for the two sisters." It is probable, however, from the account above given, that the elder brother alone contracted scabies by the vaccination, and that the younger brother's case was simply contagion, arising from sleeping with his brother. The sequel is soon told. The ordinary sulphur ointment of the Skin Hospital *Pharmacopæia*, and a weak nitric acid lotion containing half a grain of perchloride of mercury to the ounce, with an acidulated aperient, gave the youths, on the first night, the sleep and comfort which they had lost since the advent of the eruption; and, on the 23rd of this month, a week after their first visit, they were well.

The next case which I have to detail is one in which herpes circinatus and pityriasis versicolor—in my experience a contagious disease—followed vaccination. The patient was sent to London by a well-known surgeon of Norwich, and was seen with me by Mr. Nayler on the 24th May last. Mr. S. E., aged 52, informed me that the vaccination performed a month ago was the third during his life. He stated that within a few days of the punctures being made his arm became considerably

inflamed, and that the vaccination did not seem to take the usual effect. Much inflammation, swelling, and irritation, occurred, and a rash appeared around and upon the part, which festered and became sore and scabby. The pityriasis was mixed up with the herpes, and soon extended to the neck and chest, and thence to the abdomen and thighs, and even to the sole of the left foot, where there had long existed a small patch of psoriasis. The irritation attending these eruptions had, doubtless, caused the patient to carry them from place to place with his fingers, and thus produce the extension of the complaint. The patient was in good average health for a man of his age; the constant irritation constituting the chief feature of his ailment. Parasitides externally and magnesian aperients, with small doses of colchicum to restrain the irritation, and sulphur vapour baths, were prescribed; and I have little doubt that, at our next interview, the report will be favourable.

The last two cases which I have to report, though fortunately the most rare, are also the most important, as they are undoubted instances of vaccino-syphilis, in all probability communicated from the same vaccinator. These two patients were sent, or rather brought, to me at an interval of eighteen days by two surgeons in a partnership firm, enjoying an extensive local and county practice. In these cases, as in the former, I am precluded from mentioning names, as explained by the following note, which I take the liberty of transcribing in consequence of the importance of the subject.

"May 25th, 1871.

"Dear Sir,—I have seen Mr. — since his return from London, and he has mentioned your request about my name appearing in connexion with the case of Mr. F.—. This patient is so very particular on many points, that I must request you not to put my name, nor the address of either patient or self: the initials, without address, I have no objection to.

"You will see by my note to Mr. Nayler, that I do not think it positive who was the vaccinator.—Believe me, dear sir, your truly,

"J. Startin, Esq."

"H. C.

Mr. F., a gentleman, unmarried, aged 46, who until the last month, when he was vaccinated for the second time, had enjoyed uninterrupted health, never having contracted syphilis or gonorrhœa, came to Savile Row, May 4th, 1871, with a message from his surgeon, who could not accompany him on that day, and was seen by myself and Mr. Nayler seven weeks after vaccination. A severe tubercular specific eruption covered very generally and closely his entire body, from the crown of his head to the palms of his hands and soles of his feet; he had also raised tubercular spots on his arm on the sites of the vaccination. Mr. F. stated that he felt very unwell the day after his vaccination, with general malaise and pains in his limbs; on the third day these symptoms increased, and the punctures became painful; and, as he was no better on the fourth day, he took a warm bath, and, the arm being inflamed and painful, he washed off the vaccination in the bath. He continued, however, to get worse, and the eruption increased from day to day until it presented the state described. He had no sore-throat, nor were the glands in the axilla or elsewhere enlarged. His pulse was quick, and he was feverish and miserable in mind and body. The treatment consisted of the internal administration, three times a day, of the iodides and bromides of potash and mercury, and the inunction, night and morning, of a mild mercurial ointment containing one grain of levigated red precipitate and five grains of strong mercurial ointment to each drachm of scented lard. The diet was carefully regulated, and the treatment energetically carried out by the patient for eight days, until May 12th, when I received Mr. F.'s second visit. He reported that all the symptoms had been gradually waning; the gums were becoming tender; otherwise Mr. F.'s condition was in every way improved, consequently a further perseverance was recommended. He made a third visit on May 12th, attended by his surgeon, Mr. C. In consultation we suggested that, as ptyalism had commenced, Mr. F. should diminish the internal and external use of mercury, but in other respects proceed as before, as convalescence had evidently set in. On May 23rd, a fourth visit from our patient occurred, when continued amendment was manifest, and the mercurials were all but discontinued, vegetable bitters and liquid extract of sarsaparilla being substituted. By passing the hand over any portion of the eruption at this time, it was found that all tubercular manifestations had disappeared, the stains only of the eruption remaining, so that the patient may be considered well.

Mr. H., the partner of Mr. C., brought a second case of vaccino-syphilis in a patient who had probably been vaccinated from the same vaccinator as Mr. F.

Miss N., aged 11, the daughter of healthy parents, was vaccinated some weeks ago for the second time. The vesicles ran an irregular course; there was much swelling and inflammation of the arm, and a febrile state of the system. A pustular eruption appeared on the face, and pustular ophthalmia with considerable conjunctivitis, but not iritis.

There were also tonsillitis and swelling of the parotid and submaxillary glands, and upon the arm vaccinated some tubercular spots and copper-coloured areolæ. These symptoms continued, with occasional variations, until my consultation with Mr. H. As the case was referrible to the same origin as that of Mr. F., a modification of the same treatment, adapted to the age of the young lady, was employed, in addition to the local application of iodine to the enlarged glands, and a solution of nitrate of silver (one grain to the ounce of distilled water) to the pustular ophthalmia—with what result remains to be proved.

With regard to imperfect or effete vaccination, but few words need be added, as these cases must have occurred to every one, both in primary and secondary vaccination, from the vaccination not taking; and the occurrence has been amply commented upon by Dr. Jenner himself (*Inquiry into the Causes and Effects of the Variolæ Vaccinæ*); by Dr. Willan (*Treatise on Vaccination*); by Dr. Bateman (*Synopsis of Cutaneous Diseases*, article Vaccinia); Dr. Plumbe (*The Value of Vaccination*); and by several other authors. A single case will, therefore, be cited. Within the last month a popular member of Parliament, representing one of the most important metropolitan boroughs, consulted me on his case of imperfect or effete vaccination, which, as usually observed, followed secondary vaccination by one of his medical constituents a few weeks previously. Mr. T. was not in robust health, owing to the nightly fatigue which his parliamentary duties entailed upon him; consequently the punctures inflamed and suppurated, the inflammation extending to the upper part of the arm and the glands beneath; the punctures then assumed the appearance of boils on an irregularly shaped and extending base, and were very painful, and interfered with the patient's rest and comfort. As Mr. T. had been prescribed tonics and alteratives by his surgeon, I did not alter the internal treatment, but applied a piece of perforated opium-plaster to the diseased spots, and directed the parts exposed through the openings in the plaster to be smeared with weak red precipitate ointment, and a fold of linen, wetted with weak spirit or carbolic acid lotion, to be applied once or twice a day and retained with a bandage. It can scarcely be necessary to remark after what has been stated that these accidents can be, and indeed are, very constantly avoided by strict attention to the directions inculcated by the illustrious Jenner and his followers down to the present time, and which this is not the place or time to recapitulate. I would, therefore, conclude these remarks by suggesting a modification of a recommendation of Mr. Bryce (*Practical Observations on the Inoculation of Cow-pox*); viz., "the test of a double inoculation at the interval of five or six days", when, should the vaccine vesicle run an abnormal or irregular course after primary vaccination, the irregular vesicle should be destroyed by means of carbolic acid and a camel's hair-brush, and a new vaccination substituted. By this there would be secured to the community the inestimable blessing, of which cavillers would deprive them in consequence of an accidental faulty carrying out of Jenner's discovery.

NOTE ON THE SUMMER TEMPERATURE OF SOME BATHS.

By JOHN MACPHERSON, M.D.

THE observations of Dr. J. Henry Bennet in the BRITISH MEDICAL JOURNAL are very just in what he says respecting the temperature of many continental watering-places, that in many, even of some elevation, the temperature is too high during the summer months for consumptive patients.

Elevation of site does not alone give low temperature or ensure coolness. A familiar example of this is Munich, which lies 1600 feet above the sea, and which, though cold in winter, is hot enough in summer. The following table gives the height above the sea and the mean summer temperature of a few baths, and shows that summer temperature often depends on other causes besides mere elevation and latitude. Thus, Schwalbach, though 600 feet higher than Kreutznach, is more than one degree warmer. Baden, in Switzerland, though 150 feet higher, is four degrees warmer than Ischl. Rippoldsau, in the Black Forest, though 1500 feet above Kreutznach, is no cooler than it.

	Elevation :—Feet.	Mean Summer Temperature.
Kreutznach.....	330 ...	64.3
Schwalbach.....	900 ...	65.5
Schinnach.....	1080 ...	70.1
Ischl	1500 ...	65
Baden	1650 ...	69
Rippoldsau.....	1850 ...	64.1
Gastein	3400 ...	57.8

The temperature of those places may, for English readers, be compared with Torquay, 60 deg. to 61 deg.; or Hastings, 61.4 deg. on the