Clinical Lecture

ON

HEREDITO-SYPHILITIC STRUMA: AND ON THE TEETH AS A MEANS OF DIAGNOSIS.

DELIVERED AT THE LONDON HOSPITAL.

BY

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GENTLEMEN,—In going through Sophia Ward on Monday last, our attention was, as you will remember, drawn to the case of a little girl who is suffering from a large ulcer on the front of her leg.

Sarah W. is a child of fairly healthy aspect, aged 11. The disease for which she is under treatment is a large oval ulcer on the front of her right leg, which has laid bare about two inches of her tibia. The ulceration has evidently been, indeed it still is, of the type of chronic phagedena. The edges are undermined; they present a livid or gray surface, and are destitute of granulations. A week ago, Mr. Powell, at my request, applied the strong nitric acid to certain parts of the edge, where the ulceration was most inclined to spread, and with decidedly good effect; although the sore did not take on healthy action.

On two occasions, as you are aware, we had passed this child without arriving at anything definite as to the diagnosis of her affection. On Monday, however, my attention was drawn to the very unusual features which the ulcer presents; and the question suggested itself to my mind—Could it depend upon an inherited taint of syphilis? Following up this idea, we looked at her teeth, and found that her upper incisors were of very peculiar shape, and, in fact, of the type most characteristic of the taint in question. We learnt, on inquiry, that she is the eldest, and, indeed, the only living child, of her parents. Her mother is stated to have had several others, but they are all dead. Further than this we had no opportunity for pursuing the family history, as neither her father nor mother was present.

On looking into her throat, we found that her uvula and soft palate had been extensively destroyed by ulceration; a condition of things which, I need not say, strongly confirmed my opinion. These discoveries at once changed my view of the case; and, instead of considering it as simply a disease of debility, I regarded it as one of specific taint to be treated by specific remedies. The quinine and cod-liver oil which she had been taking were discontinued, and iodide of potassium in full doses was prescribed. The result of this change was that, in a few days, the edges of the sore have assumed a freely granulating condition.

In this instance, the usefulness of the teeth as a means of diagnosis was very forcibly illustrated. Usually, the subjects of inherited syphilis display in their physiognomy peculiarities sufficiently well marked to lead, if not to a positive opinion, at least to a strong suspicion. They show, in nine cases out of ten, a very pasty, pallid skin, and a drawn, haggard expression of face, as of premature old age. The bridge of the nose is almost always sunken and broad,

and there are frequently little pits or cicatrices about the cheeks and forehead, and symmetrical linear scars extending from the angles of the mouth. In Abigail Hammond, a girl who occupies a bed in the next ward, suffering from disease of the knee-joint, all these peculiarities are very noticeable; and the *tout ensemble* of her visage would attract the attention of even a careless observer. She has also suffered from interstitial keratitis, which has left both her corneæ hazy; whilst both pupils are notched and irregular, from the effects of a bygone attack of iritis.

Sarah W., however, although not robust looking, does not differ materially in appearance from hundreds of other children of her age. We had, as I have said, prescribed for her on two occasions without suspecting the true nature of her disease. It was her teeth, and her teeth only, which led me to give a confident opinion as to her diathesis, and to alter the treatment of her case. Now, however, that we have gained this knowledge, it is easy to see that there are suspicious features in the ulcer itself. Notice the surface of the exposed bone. Instead of being smooth and even as that of a healthy tibia should be, it is raised, worm-eaten, and like pumice-stone, remarkably resembling what we often see on the skull when exposed by the ulceration of a syphilitic node. It is clear that the disease has begun in chronic periostitis, and that thickening of the exterior of the bone has preceded the phagedenic ulceration by which the surface has been exposed.

We will, however, for the present, restrict our attention to the teeth as a means of diagnosis of hereditary taint. On this important symptom, I will offer for your guidance the following observations:—

1. Remember that it is the permanent set only which show any peculiarities. The milk-teeth of syphilitic infants, although liable to premature caries, shew no peculiarities of form.

2. *The central upper incisors are the test-teeth.* You may neglect all the others; for, although malformations are often observed in them also, as, for instance, a rounded peg-like form in the lower incisors, yet there is nothing that is trustworthy, and much that is liable to mislead. Look at once at the two upper central incisors; and if they be broad, well-made teeth, you may throw away suspicion as far as dental indications are concerned.

3. The peculiarities of the central upper incisors which denote hereditary syphilis are well shewn in the two patients to whom I have referred, and in the sketches which I now exhibit. The teeth are short and narrow. Instead of becoming wider as they descend from the gum, they are narrower at their free edges than at their crowns, their angles having been, as it were, rounded off. In the centre of their free edge is a deep vertical notch, made by the breaking away or non-development of the middle lobe of the tooth-crown. This notch, taken together with the narrowness and shortness of the tooth, is the main peculiarity; but you will observe also that the colour of these teeth is not good. Instead of looking like ivory with a thin coating of pearl, they present a semi-translucent appearance, not unlike that of bad size, as we see it displayed in the oilmen's shops.

In respect to the value of this symptom, I may express the utmost confidence in it. I frequently

see sets of teeth so characteristic that, without asking for any other knowledge, I would venture a positive opinion as to their possessor having suffered in infancy from inherited syphilis. In the majority, of course, the peculiar features are less well marked, and furnish only one among many symptoms on which to base a diagnosis. It is only by long practice in the observation of the malformations of teeth, that dexterity in using them as means of diagnosis can be obtained. You must at first exercise the utmost caution, or you may be misled into great errors. Remember that it is not all irregular or misshapen teeth which indicate hereditary syphilis. *The commoner and more conspicuous varieties of malformation have, indeed, nothing to do with that disease.* Craggy or "rocky" teeth are not syphilitic; "honey-combed" teeth (eaten into little pits on their surfaces) are not syphilitic; as a rough rule, teeth which are much broken have nothing to do with the syphilitic type. Whenever you see a whole row of front teeth marked by a horizontal line or furrow, which crosses them midway between the neck and the edge (or nearer to the latter), and at the same level on all, you may, for the most part, dismiss the suspicion of syphilis. It is the notching and dwarfing of the upper central incisors which constitutes the only condition to which suspicion ought to attach. As I have stated, this condition is, as compared with certain others ("honey-combed," "rocky teeth," etc.), but rarely met with. The great usefulness of this symptom consists in the fact that it is objective and indelible. You need ask no questions; but have simply to observe and draw your own conclusions. In many, indeed in a majority, of the cases in which hereditary syphilis is suspected, you are precluded, by the fear of causing family mistrust, from putting any direct questions. In most instances, the taint has been derived from the father, who had suffered from syphilis before marriage. The mother of the child is not unfrequently in entire ignorance of the nature of its malady; and it would be unkind and very wrong to excite her suspicions. In seeking for corroborative testimony, after having inspected the teeth, you will proceed with great circumspection. It is a good plan to ask if the child suffered much when cutting its first teeth, if measles, scarlet fever, etc., occurred in infancy. Such questions will generally elicit what you want to know, without conveying any hint whatever as to your own view of the case. If you are told that when a baby the child was very ailing and puny, suffered from rash, had "thrush" badly, and was much troubled with snuffles, it will not be needful to push the investigation much further. You may ask if the "thrush went through it"; and the answer you will receive will often inform you as to whether the child had condylomata at the anus. The children who suffer severely from hereditary syphilis are usually the eldest in the family. Almost always those who present well characterised teeth are the eldest living. Very often there have been either still-births, or several have died in infancy, who, if they had lived, would have been older than the patient; but still, almost always, the latter is the oldest living. This circumstance is, of course, easily explained by reference to the fact that the parental taint has usually been acquired before marriage, and is, with the lapse of years, gradually wearing out. I have, in many instances, found the eldest child of a syphi-

litic family with notched teeth and senile physiognomy; the second child presenting similar features in a less marked degree; the third less still; and the fourth or fifth appearing to be in good health, and free from any peculiarity either in teeth or features.

That the syphilitic taint existing in the parents is peculiarly fatal to the life of the offspring, is an undoubted fact. In many cases a syphilitic husband is not fecund, and no conceptions occur. In others, two or three miscarriages happen soon after marriage, and then the woman ceases to conceive; whilst in others, and the larger proportion, a succession either of premature births, or of tainted infants destined to die within a few months, occurs. The number of infants inheriting the syphilitic taint in a severe form who are ultimately reared is, I suspect, but small. I shall bring before you this afternoon three patients, the undoubted subjects of inherited syphilis, and you will notice that in each instance the patient is an only child. All of them are girls, another fact worthy of notice. To whatever cause it may be assigned, there is no doubt that a larger proportion of our patients with this form of disease are females. I suspect that this is so because a larger number of male conceptions end in abortion.

I will now ask your attention to the case of Ann Inkpenn, a little girl aged 7, whom we admitted yesterday. She comes on account of angular curvature of the dorsal spine, attended with iliac abscess, which has opened in the right groin. Her physiognomy is markedly syphilitic, the skin being thick and sallow, the bridge of the nose flat, and the lips puckered by cicatrices. She has as yet not cut any of her permanent teeth. Let us look at the state of things in her mouth. You will observe that she has lost all her upper incisors and her two lower central ones; the gums are quite sound, and look as if the teeth had been out for long, and her mother tells me that it is more than four years since they fell. I told you just now that the milk-teeth are not affected, as regards their form, by hereditary syphilis, but that they are liable to premature caries. This early caries, I may add, usually affects the upper incisors; that is, the same teeth which, in the permanent set, shew the most characteristic deviations from the normal form. It is very common, indeed, for these patients to lose their front teeth several years before those of the second set appear.

The history of the patient now before us (Inkpenn) we obtained very easily. Having first mentioned to those of you who were then present my opinion as to the nature of the case, I simply asked her mother whether the child was healthy as a baby, and was at once told that she had suffered most severely "from the disease from her father." It appears that for years she was puny and very ailing, that she had snuffles, a bad rash over the body, and "thrush in the mouth," which, if we interpret, probably means syphilitic stomatitis. You will notice that she has a divergent strabismus, her right eye looking outwards.

Ann Inkpenn is the subject of caries of the bodies of the dorsal vertebrae; Sarah W. has disease of her tibia; and in the case of the third patient, Abigail Hammond, there is chronic disease of the knee-joint. All three would, a few years ago, have been considered "strumous" in a marked degree; indeed, the

form of ophthalmia from which Hammond has suffered is designated in most ophthalmic treatises as *par excellence* "strumous corneitis." Very vague, as you know, is the meaning usually attached to this word "struma." If, however, names are to be of any use as indicative of a knowledge of the causes of the malady designated, we must insist upon its receiving a modifying addition in the present instances. These patients are not "strumous" in the sense of being liable to tuberculous affections, or likely to die of phthisis, nor do any of them show tendency to disease of the lymphatic glands. There is no reason for believing that the diseases from which they suffer are other than the direct consequences of the specific taint derived from their parents. The treatment likely to be most useful in each instance is that of tertiary syphilis, namely, full doses of the iodides and small ones of mercurials, whilst comparatively little good would come of the use of tonics and cod-liver oil. The distinction between tubercular struma and heredito-syphilitic struma* is, therefore, one of the utmost importance.

* The word "struma", to which some may object in the sense here used, has been retained after much consideration. We have no other word by which to designate the state of constitutional peculiarity to which reference is made. There is no doubt but that the various affections incident chiefly to childhood and the pre-adult period, which have hitherto been classed as struma, and will be so styled for many years, are yet really due to a variety of morbid causes. Some occur in the tubercular diathesis, some are the direct consequences of one or other of the exanthemes, some are due to inherited syphilitic taint, whilst others appear to be chiefly due to a peculiarly feeble state of the capillary circulation. It is quite possible to group the various strumous disorders in relation to their different causes, though very frequently the result is complicated by the coexistence of several of the influences mentioned. Instead, however, of attempting to disuse the term struma altogether, I would propose to acknowledge that it is, when used alone, destitute of all precision as to the exact pathology of the disorder so designated, and to habitually append to it the adjectives, "tubercular", "heredito-syphilitic", "post exanthematous", etc., as the case may be.

SOLID MATTER IN THE WATER. "The quantity of solid matter," says Dr. E. Frankland, "contained in the water varies from five to fifty grains per gallon. When this quantity is exceeded the water generally acquires a taste, and may be regarded as *abnormal* water. The water of the ocean is in this condition. The rivers which flow into the sea carry with them matters dissolved, and leave them there, for the solid matters are not carried back by evaporation. Therefore, the sea contains a larger proportion of these substances than is contained in the water of rivers; and we get this effect on a still more exaggerated scale when in hot climates rivers empty themselves into lakes which have no outlet. This is the case with the Dead Sea. The river Jordan which is constantly flowing into it contains seventy-five grains of solid matter in the gallon; and none of this matter is returned again into the atmosphere, or no practical amount; therefore there is a constant accumulation of the saline matters going on there, and in this Dead Sea we have no less than two thousand six hundred grains of solid constituents to the gallon of water. The same effect takes place in a very recently-discovered lake in the north of Australia, a lake discovered a few months ago. It is highly charged with saline matters, and is known to possess no outlet. There is a similar instance in the celebrated Elton Lake in Russia, which is eleven miles long, eight miles broad, and on an average only fifteen inches deep. In summer it appears to be covered with snow in consequence of the evaporation of the water forming a crust of saline matter. No less than two hundred thousand tons of salt are yearly extracted from this lake." (*Chem. News.*)

Original Communications.

EXCERPTS FROM DAILY PRACTICE.

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I.—DIAGNOSIS OF TUMOURS.

SOME cases showing errors in diagnosis as to the nature of certain tumours having recently been noticed in the medical journals, I trust the following example, occurring in my own practice, will not be without interest to the profession.

Three months ago, a farmer's widow, aged 64, asked me to remove a tumour of the size of a pullet's egg, which was present over the nape of the neck, exactly in the median line. It had existed for six months, and for the last six weeks had rapidly increased. Since its appearance, it had been painless, except for two nights before I saw her. The occurrence of pain, together with the rapid growth, induced her to apply for aid. The tumour was superficial, moderately resilient to the fingers, very circumscribed, moving freely over the subjacent tissue; and the skin, though somewhat adherent, was perfectly healthy. There was no suspicious family history. The patient's own health up to the present time had been good, but some of the neck-glands were decidedly enlarged. On my remarking this to the patient, she positively assured me that at the time she had a cold; and that, when this was the case, her neck-glands invariably sympathised; that they had been in that condition a few days only; that, since the existence of the tumour, they had once before enlarged, and again entirely subsided. She assured me this with so much emphasis that I was disposed to give full credit to her belief, and considered the tumour to be steatomatous. She had previously shown it to another medical man, who, from what I could learn, had formed a similar opinion.

Two days after consultation, I operated; and, on transfixing the base of the tumour, I found I had certainly made an error. The incised tumour appeared of a dull, non-vascular, opaque white. Fearing malignancy, I now made a clean removal (skin included), which, from the circumscribed character of the mass, was not difficult. I then secured the wound with silver suture, and hoped the end might justify the means.

Examination by the unassisted eye and by the microscope made me none the more satisfied; and I forwarded a portion of the tumour and an outline of the case to an eminent surgeon and microscopist, saying that I feared its malignancy, and that to my eye it appeared to consist of spheroidal granular cells, with, as far as I could make out, very sparing if any fibroid stroma. He confirmed these appearances, and added: "I am disposed to regard it as a non-malignant growth. In some respects it is not unlike the more solid molluscous tumours; not the steatomata or atheromatous cysts, but the solid growths which consist of imperfectly developed gland-tissue." Such was Mr. Hulke's opinion.

For about ten days all seemed to go on well; the wound was healing, and the neck-glands were, according to my patient, in *statu quo*; and, though my hands and eyes began to dispute her evidence, my mind was only too glad to believe her. In a few days more it was useless to deny what was too plainly to be seen. The wound was not healthy, and the glands were larger and more painful. The disease then began in earnest to declare itself; day by day its progress could literally be seen; in