CASE OF SCORBUTIC SPINAL HÆMORRHAGE.

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ON August 9th last, I was asked to see, with Mr. Muriel, a young lady, a farmer's daughter, aged 13, who had been long ill, viz., for four or five months, with cough, expectoration, and subacute inflammatory symptoms in the chest; and who was then suffering from severe pain and constant spasmodic startings and jerkings of both her legs and thighs, with which she had been seized quite suddenly five days before.

At our visit, she was lying in bed upon her back with the shoulders raised, in a most constrained position, with the hand of a nurse firmly pressing upon both her thighs so as to keep them down and steady, and to prevent the constant painful jerkings of the limbs which immediately took place when this restraining force was removed.

This condition, we were told, had existed continuously for the preceding forty-eight hours, both through the nights and days; and, although she had been somewhat quieted by opium, yet she begged, or almost insisted, upon the hands being never removed; and the nurses had, in fact, most unweariedly kept up their irksome and straining attentions, and had been kneeling by the bedside, doing this, for all this time.

She was noticed to be very pale and thin, though mentally clear and bright; and, on inquiry, it appeared that her history was bad, she having lost several near relatives from consumption; also that, ever since the age of one year, she had herself suffered from otorrhœa and partial deafness, and that, for the last four months, she had been suffering from lung-disease, consisting of subacute pleuropneumonia, terminating in abscess at the base of the left lung. On examination, dulness, feeble breathing, and large moist sounds were found to be still present at the left base. The heart's sounds, though free from *bruit*, were also heard over a large portion of the left side.

On further examination, her pulse was found to be small, weak, and quick, and her temperature to be 100° Fahr. The urine was free from albumen. There was also entire freedom from pain along the spine, as well as in the limbs when the spasmodic startings were restrained. And it was found that sensation in the legs was unaffected, and that no spasmodic jerkings were produced by merely touching the skin, although the spasmus immediately recommenced directly the pressure of the nurse's hands was removed from the thighs.

Taking into consideration the febrile temperature, the strumous history, the recent and still existing thoracic disease, the most feasible diagnosis now appeared to be that of some form of scrofulous disease, affecting the spinal cord and its membranes, either directly or by propagation from the diseased chest; but, on still further inquiry, it appeared that, for the preceding two or three weeks, she had had recurring small hæmorrhages under the skin of the legs, and it was also elicited that she was of a very peculiar nature and habits, that she had a great dislike to vegetables and fruit—indeed, was scarcely ever known to eat any, except on the most rare occasions—and that her habitual diet consisted of meat, or beef-tea, and bread.

Taking these additional facts into consideration, even although there was an absence of sponginess of the gums or other hæmorrhagic conditions, we finally arrived at the opinion that she was really suffering from scurvy, that there had been a scorbutic hæmorrhage into the membranes of the lower part of the spinal cord, that the paralysis and spasm—the spastic paralysis—was due to this, and possibly that much of her generally diseased condition might also be due to the depraved condition of her blood.

Acting upon these views, we decided at once to put her upon small and frequently repeated doses of lemon-juice, and to give her in addition nothing but a few drops of tincture of belladonna, or some opium, if the restlessness required it.

The result was most satisfactory. The symptoms, after four or five days, began slowly to amend. The startings gradually subsided; the hæmorrhages did not recur; and soon she began to regain some power of movement in the legs, and in due time to be removed from her bed; and, on September 30th, she could stand and walk.

It will thus be seen that the progress of this case, under merely antiscorbutic diet, exceeded our most hopeful anticipations. At the visit on August 9th, the prospect appeared most gloomy, and the prognosis given was most grave; but the girl was, at the end of six or seven weeks, up, and walking about with the aid of sticks or the arm of a friend, and was very greatly improved in health and general appearance.

The lemon-juice was continued up to the end of September, and it may be said most distinctly that, within a very few days of its commencement, the improvement had commenced, and was going on.

In the *Lancet* for June 1880, I have recorded four cases, under the title of Scurvy in Civil Practice, which had then recently occurred to me; and, since that time, I have met with at least one other. All these patients were either well cared for, or in sufficiently comfortable circumstances, and the diseased condition appeared to have been induced either by eccentricity as to diet, by over-care as to non-use of foods which were thought not to agree, or by prolonged use of liquids only, such as milk-gruel or beef-tea, which had been prescribed for the cure of some dyspeptic disorder.

Attention has been called by authors, especially Buzzard and Aitken, to the occasional occurrence of such scurvy by inadvertence, as I would venture to call it, in private practice; but the occurrence of so many undoubted and discovered cases in one man's practice in so short a time would make it probable that the disease may be comparatively common (though often unsuspected) to a greater or less degree, and that we should often do well, in obscure cases of causeless debility and malnutrition, to inquire closely into the habitual dietary of the patient.

In one of my cases recorded in the *Lancet*, vertigo and recurring attacks of bronchitis were the marked symptoms before the hæmorrhages appeared; and I would venture, in reference to the present case, to suggest that possibly the pneumonic attack might have been due to the depraved nutrition of the lung-tissue by the scorbutic blood.

Like this case, all my others recovered well and steadily under the use of lemon or lime juice, and the steady enforcement of a more vegetable diet.

The state of spastic paralysis in this young girl was probably explained, I believe, by assuming a mechanical irritation caused by a hæmorrhage into the membranes of the cord in the lower dorsal region; and the gradual progress towards recovery has, doubtless, been coincident with the slow absorption of the clot, in the same way as the various hæmorrhages under the skin had been seen to be gradually removed.

CLINICAL MEMORANDA.

ON THE FROTHING OF URINE AND OTHER ORGANIC LIQUIDS.

IN the *Glasgow Medical Journal* for October 1881, is a paper on what the author calls *Physaliation*, or the property which certain organic liquids, especially albuminous ones, possess of yielding a more or less permanent froth when agitated with gas. Dr. Kirk gives details of several experiments, in which the amount of froth produced by various urines, healthy and pathological, was compared with that produced by pure water under similar circumstances. By far the most important deduction from these experiments seems to be, that albuminous urines are not invariably found to yield an abundant froth; indeed, some specimens, though highly albuminous, are said to have yielded no froth at all—not even so much as is observed in the case of the healthy renal secretion. Dr. Kirk mentions that the reaction of the albuminous urine to vegetable colouring matters has a certain modifying influence upon the "physalisability" of the liquid; some alkaline specimens yielding no froth till they have been treated with acid. This may account, possibly, for the absence of any frothing in one of his own cases, in which the urine (in a case of cystitis) was slightly ammoniacal.

Another influence which is mentioned by Dr. Kirk is, the action of oily matter in forming a film upon the surface of the liquid, and so preventing the rising of the froth. But there is an agent which seems to have escaped Dr. Kirk's notice, though it is well known by chemists to have a powerful action in preventing the frothing of albuminous liquids. A very small quantity of alcohol, added to an albuminous solution, has the effect of completely preventing the formation of froth on the surface of the liquid, even when violently agitated with air.

The question has for some time interested physiologists: whether or not alcohol may be separated, as such, by healthy kidneys in normal individuals. If such action by the healthy kidney, associated with a normal digestive apparatus, be deemed possible, surely such an occurrence should be carefully looked for in cases of disease. It would be interesting to know whether alcohol was strictly withheld from those of Dr. Kirk's patients in whose urine no frothing could be detected; and, in all future cases of non-physalisable albuminous urine, a careful search for alcohol in the secretion would add something to the interest of the observation, whether that agent happened to be present or not.

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