

Correspondence.

"Audi alteram partem."

PROCESS FOR OBTAINING STRYCHNINE FROM THE ORGANS AND TISSUES OF THE BODY.

To the Editor of THE LANCET.

SIR,—In accordance with our promise to you in our communication of the 11th inst., we now send you the details of the process which enabled us to separate strychnine from the contents of the stomach, blood, liver, kidneys, and tissues of animals destroyed by that poison, and, in one case, even so long as twelve months after interment. Previous to entering into details, we would observe that, as the smallest trace of organic and other matters invariably interferes with, and often prevents, the characteristic colour of the test for strychnine, it is essentially necessary to isolate this alkaloid before applying the appropriate tests; indeed, this perfect isolation constitutes the value of our process. We would observe, further, that putrefaction, so far from interfering with the separation of the strychnine, greatly facilitates it.

The process is as follows:—Digest the contents of a stomach, together with that organ itself, (cut into small pieces,) with water acidulated with hydrochloric acid, (acetic or sulphuric acids will do, but we give the preference to the hydrochloric,) in a porcelain dish, over a water-bath, for not less than two hours; when cold, strain through muslin, and filter; evaporate to dryness over a water-bath; digest the residue in alcohol, acidulated with a few drops of hydrochloric acid; filter, and evaporate to dryness over a water-bath; treat with distilled water, and when all that is soluble is taken up, (in some cases the whole is dissolved, in others there is a considerable residue,) filter into a long wide tube; then add excess of ammonia, and agitate with about half an ounce of chloroform. When the chloroform has subsided, it must be separated by means of a pipette, and poured into a small evaporating basin, and evaporated to dryness. This residue contains the strychnine, but with so much organic matter that it would be absurd to expect the reactions of the test, except when present in large quantity, until further purified, and to effect this it must then be moistened with concentrated sulphuric acid, and allowed to remain over the water-bath for at least half an hour; distilled water must then be added, and the solution poured into a test-tube, care being taken to rinse out the dish with hot distilled water; when cold, add excess of ammonia, and agitate with about three drachms of chloroform. This last chloroform solution usually contains the strychnine in a state sufficiently pure to admit of testing; but in some cases it will be found necessary, when the substance is present in extremely minute quantity, to repeat the operation of charring the organic matter with concentrated sulphuric acid, and again separating with chloroform. A small portion of this chloroform is now to be separated by a small pipette, and several drops allowed to evaporate successively on as small a space as possible on a white porcelain capsule. A drop of concentrated sulphuric acid is then added, allowed to remain for half a minute, and a small crystal of bichromate of potash is then placed in it, and after remaining for a few seconds, is drawn across in various directions by means of a fine glass rod. The characteristic violet colour will mark the course of the crystal.

It cannot be too generally known that the substances said wholly to prevent the detection of strychnine can never do so in the hands of a competent analyst; and we would mention that in our experiments they did not oppose the slightest obstacle.

When the liver, spleen, or kidneys are the subject of analysis, it is advantageous to reduce these organs to a state of pulp in a mortar previous to digestion with acidulated water. In the case of the tissues, if recent, they should be cut up as fine as possible, and triturated in a mortar in like manner; if long after interment, this proceeding is unnecessary.

In the above process, it is occasionally found that the particles of chloroform do not readily join together. In this case, placing the tube in hot water will generally effect that object; but in some cases it will be found necessary to dilute largely with water.

From what we have said, it will be seen that, by the process given in evidence by Dr. Taylor at the recent trial at the Old

Bailey, the strychnine could not be obtained (except when present in very large quantity) in such a state of purity as to exhibit the characteristic reactions, and would utterly fail where the blood, organs, or tissues were the subject of analysis. Consequently, for future security, it must be a matter of regret that some more perfect method was not employed, particularly as the symptoms on the Sunday and Monday night could not be those of strychnine, seeing that there was but one paroxysm, followed by a long intermission on each occasion, and which might with more propriety be attributed to cyanide of potassium or ammonium. We would, in conclusion, state our perfect concurrence in the opinions publicly expressed by Mr. Herapath, Dr. Letheby, and others, that the colour-tests, with proper precautions, are in the highest degree trustworthy.

We are, Sir, your obedient servants,

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DETECTION OF STRYCHNINE.

To the Editor of THE LANCET.

SIR,—It appears from the evidence on the late trial of the Queen v. Palmer, that the difference of opinion between the analytical chemists as to the detection of strychnia depends upon the question whether or not that drug undergoes positive change by its absorption into the blood during the continuance of vitality.*

It seems probable that the following experiment would at once determine this point. It appears strange, at all events, that it has not been tried, and the result reported.

Let strychnia be administered to an animal in doses sufficient to produce decided evidences of its operation, (the first three phenomena of Dr. Marshall Hall,) but *not* sufficient to cause death. Let the animal be subsequently killed by *other* means. If, under these circumstances, strychnia were detected, it seems to me that the question would be solved.

Will you permit me to direct attention to another question which arises in connexion with this "cause célèbre"?

The inquest on John Parsons Cook was held early in December. Dr. Taylor then stated his belief that death was attributable to strychnia. Between that period and the month of February, paragraphs, headed "Dr. Taylor's inaccuracy," were inserted (with great want of judgment, to use no harsher phrase) in many newspapers. In the March following, a woman died with all the symptoms of poisoning by strychnia, and this alkaloid was abundantly found in her system.

If the strychnia, in this case, had been administered with intent to kill, how far had the selection of that poison, or indeed the employment of any poison whatever, been influenced by the paragraphs above mentioned?

I need not point out how serious a question this must be to those journalists who thoughtlessly inserted the statements mentioned.

I am, Sir, your obedient servant,
Somerset-street, Portman-square. H. G. WRIGHT, M.D.

MR. GRIFFIN'S MOVEMENT.—POSITION OF POOR-LAW SURGEONS.

No. I.

To the Editor of THE LANCET.

SIR,—I shall feel obliged by your laying before your readers the following quotation and letter, which will explain to the Union Surgeons the present aspect of our affairs. The private correspondence I am not at liberty to publish, but I can express my perfect confidence that the Right Hon. Sir John Trollope, who has kindly undertaken to advocate our cause in the House of Commons, will give it the utmost aid of his talent and influence; and that we shall, ere long, succeed in convincing the Legislature that, as a class, the Union Medical Officers have for a series of years been most unfairly treated, and in obtaining from the justice of the House a measure to enforce from the Poor-law Board a proper and equitable system of remuneration.

The petition, signed by upwards of a hundred medical officers

* Dr. TAYLOR.—It (strychnia) is absorbed into the blood. It is in a great part changed in the blood.

Dr. LETHEBY.—I do not agree that it is changed when it is absorbed into the blood; but I agree with its absorption.

The Times—Report of Evidence on Trial.