

of split pease, in the course of the blood vessels, as seen on removing the mucous membrane. The marks of inflammation were seen both in that membrane and in the tissue below on its removal. Rectum slightly vascular, but not more so than might have been expected at his age.

The other abdominal viscera did not present any appearance requiring comment.

CHEMICAL ANALYSIS.

1. An ounce weight of the cake was cut into pieces, and boiled in six ounces of distilled water, with two drachms of muriatic acid. Three small bundles of the finest copper wire were successively introduced, and boiled in this liquid. On their removal the bright colour of the copper was found to have been completely converted into an iron grey.

2. A comparative experiment was then made with the same quantity of muriatic acid, distilled water, and copper wire. After boiling for the same length of time, the copper was removed unchanged.

3. The iron grey wire having been previously carefully washed and wiped dry, was then introduced into a test tube, and heated to a low red heat. A white ring sublimed, and the copper wire lost its iron grey colour. On examining the white ring through the microscope, an abundance of crystals with equilateral triangular facets or surfaces were distinctly seen. About a drachm of distilled water was then introduced into the tube, and boiled till the white ring was dissolved, the copper wire having been previously removed. When cold, the three following tests were applied:—

1. On the addition of the ammoniaco-nitrate of silver in solution, there was a well marked yellow curdy precipitate, which soon became brown.

2. On adding a solution of the ammoniaco-sulphate of copper, a very slight green colour resulted, not very distinct at first, but which, on standing, deposited a well marked green precipitate.

3. On passing a few bubbles of sulphuretted hydrogen gas through the remainder in the tube, a bright yellow was immediately the result.

The liquid in which the cake had been boiled was then filtered, and a stream of sulphuretted hydrogen gas was passed through it. The excess was driven off by boiling, and the liquid filtered. A very copious orange-coloured precipitate which had settled in the bottom of the vessel was carefully collected and dried. A portion of it was then heated in a test tube, with twice its bulk of black flux, which had been previously carefully dried. A beautiful metallic ring was sublimed, brilliant, shining, and with a distinct, dull, granular surface internally.

The Flour.—This was submitted to the same process that the cake had undergone. There was no deposit upon the copper wire, which came out untarnished.

Butter.—The same steps were gone through as with the cake and flour. The copper wire came out untarnished.

Contents of the Stomach.—These were filtered, two drachms of muriatic acid added, and copper wire boiled in the liquid. No change was produced in the copper wire.

Mucus scraped from the Stomach.—This was dried on filtering paper, and put into a test tube with wood charcoal, and heated. No result could be obtained on account of the empyreumatised moisture, which obscured the tube.

The Stomach.—This was cut into pieces, and boiled in a pill of distilled water, with half an ounce of muriatic acid. The liquid was then strained, and boiled with half an ounce of acetic acid to deposit the animal matter. After straining, this was again boiled with animal charcoal, (purified and recently incinerated,) for the purpose of clearing the liquid. Copper wire boiled in this became partially coated with grey. On treating this wire in a test tube, a white crystalline ring was sublimed, in which numerous octohedral crystals and triangular facets were distinctly seen.

The Liver.—About one-third, cut into small pieces, was

boiled in eight ounces of distilled water, with two ounces and three quarters of muriatic acid. Copper wire was boiled in this. It was partially coated with a grey colour. After washing and drying, it was heated in a test tube. There was a faint white ring sublimed, but no characteristic crystals could be seen under the microscope.

Sixteen ounces weight of the liver was put into an evaporating basin of Berlin porcelain, with two ounces and a half weight of pure sulphuric acid, previously tested. This was put in a sand bath, where it was allowed to remain till it became carbonized. To the ash six drachms of pure muriatic acid, and the same quantity of pure nitric acid, were added. The whole was then placed in the sand, both evaporated to dryness and incinerated. The ash was powdered and boiled in six ounces of distilled water. One drachm and a half of muriatic acid was then added, and copper wire boiled in it. On its removal, it was of an iron grey colour, with here and there the copper tinge. On heating the wire to a low red heat in a test tube, a white ring was slowly sublimed. On examining this in the microscope, the octohedral crystals and triangular facets were distinctly seen.

The Blood.—To four ounces of this, half an ounce of muriatic acid was added. Copper wire boiled in this became of a grey colour, and on heating it at a low red heat in a small test tube, a white crystalline ring was observed under the microscope. This showed the octohedral crystals, and triangular facets, with remarkable distinctness.

REPORT.

From the well marked appearances of acute inflammation in the pharynx, stomach, and duodenum, and from the circumstance of arsenic having been detected in the substance of the stomach, the liver, and the blood, we are of opinion that the death of the deceased was caused by taking arsenic.

THOMAS ELLIOT, Surgeon.

RICHARD JAMES, M.D.

FRIDAY, JUNE 6, 1844.

Post Mortem Examination of Mrs. Margaret Graham, of Kirk Andrews, who died on November 27th, 1844.

Grave deep—soil dry—coffin made of oak, and quite perfect. The nails not rusted, and the inscription on the plate very little erased. The words were “Margaret Graham, aged 45 years, 1844.”

The winding-sheet was marked with the initials M. H., with the figure 2 below, and was damped with a yellowish fluid. It was also completely covered with mould, which presented the appearance of fine cotton wool spread over it. On removing this substance from the face, the latter appeared of a yellowish brown colour, and the skin almost of the consistence of shoe-sole leather, except over the gristly part of the nose, where it was soft. The upper lip was shrunk, and the teeth projected beyond those of the lower jaw. The eyelids were soft, moist, and much depressed; the eyeballs collapsed, but their different textures quite distinct. The hair was of a grey colour, long, and very easily pulled out. The integuments of the chest were of a dullish green colour in front, and the cuticle peeled off with the slightest rubbing. The integuments of the belly presented the same appearance,—they were soft and elastic.

INTERNAL EXAMINATION.

The Head.—On removing the upper part of the skull, a large quantity of air was found distending the outer membrane covering the brain. The different membranes presented nothing particular in appearance. The brain itself was very soft, but its component parts could be easily distinguished by their difference in colour. There was no appearance of any disease discovered.

Chest—Lungs.—Their surface was of a pinkish grey co-