POISONING BY OXALIC ACID.

(Read before the Boston Society for Medical Improvement, in 1894, and communicated for the Boston Medical and Surgical Journal.)

D. McG., an Irishman, about 30 years old; keeps a stall in the market place; manufactures suspenders. About a year since, he purchased in New York a quantity of oxalic acid for the purpose of cleaning corroded brass buckles, which he uses in making suspenders. During a late sickness in his family he purchased a quarter of a pound of Epsom salts, a considerable portion of which remained in the house, and was kept in the same place with the oxalic acid, and in a similar colored paper.

Feb. 1st.—At half past 8 o'clock, A. M., he proposed taking a dose of salts, and by mistake took the oxalic acid. Having measured out about one third of a teacupful of the crystallized oxalic acid, he poured upon it sufficient warm water to fill the cup, and placed it on the stove to dissolve, stirring it occasionally. He remarked that his salts did not all dissolve, and then drank the solution at a single draught. He immediately perceived by the strong acid taste, burning sensation in the throat, and "a gathering at stomach," that he had made a mistake, and thrust a leather strap into the fauces to provoke vomiting. He also drank warm water for the same purpose. Vomiting took place, and the acid thrown up was so strong as to change the black color of his vest to a red brown when it flowed upon it. One of his friends in the mean time ran into a neighboring apothecary's shop, with the undissolved acid remaining in the cup, and was told that it was a deadly poison. He then called upon a physician, who ordered an emetic of ipecacuanha to be given, and shortly after visited the patient.

I was called in and desired to take charge of the patient at 8½, P. M. I found there an irregular practitioner, who had given him an additional emetic of tart. antimony, and followed it by a dose of castor oil. Vomited "drops of blood." When I saw the patient he was in a state of complete prostration; face, lips, throat and tongue swollen and livid; pulse almost extinct, but could be felt by a delicate touch, and was found to be exceedingly weak, rapid, and so irregular that it could not be counted. Heart in a continual fluttering palpitation; great jactitation and distress, with incessant vomiting. The matter evacuated by vomiting was a thick grumous and jelly-like fluid, of a yellow color, mixed with white flocculi. Does not complain of pain, even when deep pressure is made over the stomach and bowels, but is in the greatest distress and anxiety. I learned that the first spontaneous vomiting, and that produced by the action of the ipecac., brought up a quantity of dark-brown matter, like chocolate. This had been thrown away, so that I could not see it myself. I found a person giving him a little white mixture, which appeared to be a mixture of chalk and water, but as the quantity was insufficient to produce the desired effect, I directed him to give calcis carbonatis, 3 iij., mixed with camphor and opium, grs. v. This was given in divided doses, but was not retained long in the stomach. I also directed him to give an injection of soap and water to evacuate the bowels.

Feb. 2d, 9½, A. M.—He has vomited continually in night a yellow

thick fluid. Tongue livid, and swollen so that he can with difficulty project the tip of it beyond the teeth; face tumid, and of a livid complexion; pulse 130, very small and thread-like; urine suppressed entirely; no evacuation from enema—gave him infusion of senna, ℥ vi.; sulph. magnesia, ℥ j.; carb. magnesia, ℥ ij. M. To be given in divided doses.

10, P.M.—Has taken the cathartic as directed, but vomited it immediately; no dejection; urine still suppressed.

3d, 9, A. M.—Vomiting has continued incessantly; distress continues; pulse 130; tongue and face still swollen and livid.

6, P. M.—Applied four leeches to epigastrium; they took hold and filled well, and did *not die*. Gave him a copious enema of soap and water, which operated effectually on the bowels, and brought away solid and liquid fecal matter.

11, P. M.—Still vomiting a grass-green fluid, with a mucous sediment and white flocculi; great distress and fear of death. Directed him to take sulphate of morphia, gr. ij.; aquæ, ℥ ij., M., in doses of a teaspoonful after each vomiting.

4th.—Vomiting diminished in frequency, but the matter is still of the same character; pulse 132, fuller and hard; tongue has a thin brown coat, and red, dry tip; very thirsty; no pain, but still distressed and anxious. Bled him nine ounces, and took the blood home to examine; applied a blister to epigastrium; increased the strength of the solution of morphia to grs. iij. to water ℥ ij. I now endeavored to learn from him and his friends exactly how much oxalic acid he had taken, and caused him to measure out several times in the cup the bulk of his dose. This he did with great exactness, and from his friends I learned how much remained undissolved in the cup. I took the quantity equal to his dose home with me to weigh, and found it to be 535 grains. I then placed it in a cup of the same capacity as that he had used, and filled it up with five ounces of water at 95 deg. F., and found that the portion undissolved was equal to that said to have been left in his cup, and weighed 58 grains; so that 477 grains were dissolved, which was the quantity taken by the patient. It appears, then, that he took nearly an ounce of oxalic acid!

On the 5th of February I found him with a full, hard and intermittent pulse of 122. Tongue covered with a brown coat, red at the tip, and dry. He is very thirsty; passed urine twice in night; vomits still yellow fluid. Bled him ℥ xij., and directed him to continue the sulphate of morphia.

10, P. M.—Vomits less, is disposed to sleep.

6th.—Pulse 100, full, but not hard; vomits less; is delirious at times; tongue covered with a bright-yellow coat; passes urine; skin of face, head, chest and nates, covered with red spots or petechiæ, appearing as if bespattered with blood.

7th.—Pulse 104, hard; tongue covered with brown coat, tip red and dry; no pain, but still distressed; vomits less frequently. Matter thrown up grass green, with grumous sediment; face, chest, &c., still covered

with red spots ; feels a sinking sensation at stomach. Continue the morphia when vomiting is urgent. He may have a little toast water, about a teaspoonful at a time

8th.—Face is sunken ; expression anxious ; pulse 100 ; tongue brown ; delirious at times ; vomiting diminished in frequency. Ordered him a little rice water, to be taken in small quantity at a time. Gave him an injection of oat-meal gruel.

9th.—Face Hippocratic ; eyes sunken ; delirium ; pulse 100 ; tongue dry, has brown coat, and red, dry tip. Has taken three cups of arrow root. Urine passed in small quantity ; distress and anxiety ; no pain on pressure at epigastrium and abdomen.

10th.—Face Hippocratic ; pulse almost insensible to touch, very weak ; delirium and stupor ; bladder distended with urine, but cannot pass ; does not vomit, although he has desire to do so. He is evidently sinking.

6, P. M.—Drew off the urine by catheter. Sunk rapidly, and died at 9, P. M., without a struggle.

Post-mortem Examination, 10½, A. M.—Muscles rigidly contracted ; numerous petechiæ on face, chest, arms and nates. Lungs free from tubercles. Emphysema of lower lobe of left lung. Crepitate under pressure. Unusual infiltration of serum in lungs. Otherwise they appear healthy. Heart does not contain blood in left ventricle and auricle, and but little in the right side of the organ. Usual quantity of liquor pericardii, about half an ounce. Liver very blue where in contact with the stomach ; otherwise appears sound. Gall-bladder very much distended with yellow bile. Stomach contains a yellow fluid, evidently colored with bile. Stomach remarkably corrugated. Mucous membrane very bright red, especially in small curvature of the organ and around the cardiac orifice. Numerous small ulcers in the mucous membrane, which is thickened and soft. Strips one third of an inch in length may be struck off by scalpel, but they cannot be torn up by the fingers when the membrane is raised. Duodenum—mucous membrane red, thickened, and has small ulcers in it. Jejunum and ileum congested with blood. Peyer's glands not enlarged. Small intestines contain soft, yellow, fluid, fæcal matter. Large intestines—colon and cæcum contain scibalæ of fæcal matter ; mucous membrane in its healthy state. Spleen natural. Bladder contains urine, but is not distended more than usual.

Took the stomach home for further examination. I found the mucous membrane very much thickened, having numerous small ulcerations, and yellow stripes which were not capable of being removed by maceration in water. Corrugation of the mucous membrane very distinctly marked. The red color of the mucous membrane remained after maceration in cold water for ten days.

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CASES OF HYSTERIA.

[THE following singular cases are related in the London Medical Gazette, by Dr. Edward Greenhow.]