ST. GEORGE'S HOSPITAL.

POISONING BY AN OUNCE OF OXALIC ACID; FATAL
RESULT ON THE FIFTH DAY.

(Under the care of Dr. PAGE.)

THE use of oxalic acid as a poison is said to be almost entirely confined to this country. This is to some extent correct, so far as the other nations of Europe are concerned; but it is employed with a felonious intent in our colonies and in the United States of America, where its peculiar properties are as well understood amongst the lower classes as they are by ourselves.

We place upon record an instance in which an ounce of the acid was swallowed—a quantity that was bought by the patient for threepence. He was at once seized with the characteristic symptoms of the poison, and was taken to St. George's Hospital, where treatment was applied with considerable relief—so much so that all immediate danger seemed to be averted. Vomiting, however, remained a persistent symptom, associated with epigastric pain, and he died on the fifth day. After death, the stomach was found to be partially congested, and contained some bloody fluid. The serum in the pericardium and pleuræ was sanguineous, and an excess of subarachnoid fluid was found in the cranium. These were the only appearances observed beyond extreme fatty degeneration of the muscular structure of the heart. There can be no doubt that the patient was in a state of considerable exhaustion, and that the fatal result took place from the influence of the poison on an already enfeebled nervous system—for he was an habitual drunkard, with a weak flabby heart that could scarcely propel its blood onwards. Added to this, he had an arcus adiposus in both eyes, and most probably also the atheromatous expression, at the comparatively early age of thirty-one years.

Many cases of poisoning by oxalic acid have been recorded in our pages, and amongst these we would refer to one by Dr. Brush, of Dublin (vol. ii. 1846, p. 39), in which recovery took place from the dose of an ounce, the same quantity as that swallowed by Dr. Page's patient. Another case of recovery from the same quantity is given by Mr. O'Shea (vol. ii. 1845, p. 293). Dr. Ogilvy, of Coventry, has recorded the most rapidly fatal case known, death occurring *three minutes* after swallowing the poison (*ibid.*, p. 205); but two cases almost as quickly fatal are briefly described by Mr. Iliff, of Newington (*ibid.*, p. 432). Mr. Alison, of East Retford, has reported a case of recovery (vol. ii. 1850, p. 502); another is related by Mr. Bourne of Nottingham (vol. i. 1851, p. 329); and another by Dr. Herbert Barker, of Bedford (vol. ii. 1855, p. 521).

For the notes of the following case we are indebted to Mr. John E. Cartwright, clinical clerk.

Richard G—, aged thirty-one, was admitted Aug. 3rd, 1860, into King's ward. He had for some years been addicted to the inordinate use of intoxicating liquors. He confessed to having been drunk three or four days in the week, and said he had had delirium tremens frequently. On the evening of the 3rd he purchased and swallowed three pennyworth of oxalic acid, said to be about an ounce. He instantly felt a burning sensation in the mouth, throat, and œsophagus, and intense pain in the stomach. He was immediately brought to the hospital, having, as he stated, vomited on the road.

On admission, the patient complained of a burning sensation along the course of the œsophagus and in the stomach; there were lividity of the face and extremities, relaxation of the muscles, and the surface was cold and clammy. His manner was rapid and nervous; the heart's action was irregular, and the sounds somewhat distant, but otherwise normal; respiration natural; pulse extremely feeble; tongue large, œdematous, and covered with thick, woolly fur; conjunctivæ dusky; pupils natural; distinct arcus senilis at the upper part of both eyes. An emetic was given, and a large quantity of green-looking fluid removed from the stomach. The stomach-pump was also used, and brought away a quantity of the same kind of fluid. He was then ordered some chalk mixture every two hours, occasionally some brandy and water, arrowroot, and beef-tea, and a mustard plaster to the epigastrium. Towards evening the surface became warmer, the pulse more perceptible, and the heart's action more regular and powerful; but the vomiting still continued, and he was unable to retain any nourishment. Injections of brandy and arrowroot were then ordered every four hours.

Aug. 4th.—He appeared much better, and slept a little during the night, but the vomiting still continued. He had

ejected since last evening about four pints of dark grumous matter. The skin was warm and perspiring; there was considerable tenderness over the epigastrium, which was resonant on percussion; bowels open once, but apparently only the injection came away; tongue red at the sides and apthous; pulse 88, irregular. He was now ordered six minims of tincture of opium, to be added to the chalk mixture, every three hours; poppy fomentations to the abdomen; the injections to be continued.

5th.—He expressed himself much better, and was able to retain a small quantity of food; vomiting still continued, but not so frequent; tongue much more healthy and cleaning; bowels open once, natural motion; there was still considerable tenderness over the epigastrium. He was then ordered a blister to that part, and soda-water occasionally.

7th.—He had continued to improve very much; the blister had given him considerable relief; no fresh symptom was noticed until the evening of this day, when the nurse observed a restlessness about his manner that reminded her of delirium tremens. At a quarter to four P.M. the following morning, he arose to relieve his bowels, and died almost immediately.

Post-mortem examination, thirty-four hours afterwards.—General appearance: The body was in good condition and well formed.—Cranium: The brain was rather soft, and the subarachnoid fluid abundant; otherwise there was no morbid appearance.—Thorax: There was a small quantity of bloody fluid in the pericardium and in each pleura; the lungs were somewhat congested posteriorly, but crepitant. The heart's valves were healthy; it was relaxed; its cavities filled with dark clots; its walls were in a state of extreme fatty degeneration.—Throat and abdomen: The fauces and œsophagus were perfectly healthy. The stomach was somewhat congested, and contained bloody fluid; its mucous membrane was entire. The liver was large and fatty. The spleen was healthy. The kidneys were large and soft; their capsules somewhat adherent.

KING'S COLLEGE HOSPITAL.

POISONING BY NITRIC ACID; FATAL RESULT SIX MONTHS
AFTERWARDS FROM ITS EFFECTS UPON THE
STOMACH AND ŒSOPHAGUS.

(Under the care of Dr. BUDD.)

IN cases of poisoning by the mineral acids, in the event of recovery from their immediate consequences, the patient runs the risk of being a wretched sufferer perhaps for the rest of his life. The following case is one of these melancholy examples, which shows most forcibly the misery which follows the injury to the stomach and œsophagus. Worn out, exhausted, and almost starved, the patient died at the end of six months after taking the poison. The autopsy revealed the seat of mischief to be in the alimentary track, from the mouth to the stomach. The latter must have been considerably injured at the time of swallowing the poison, as was proved by the presence of a distinct cicatrix, with puckering and induration near the pyloric extremity of the viscus. The cardiac orifice was slightly constricted, and the œsophagus bore evident traces of the injury it had sustained. With such important lesions, although chronic, no surprise need be felt at the result.

It is interesting to note, that although the patient complained of some hoarseness, the larynx was found to be uninjured. This circumstance is explained by Ryland and by Porter, in cases of *suicide* by the mineral acids, from the fact that the epiglottis during swallowing completely covers the upper part of the glottis, and thus the acid passes down the œsophagus without affecting the larynx.* But Dr. Taylor shows that when these acids are taken by mistake, or forcibly administered, the larynx is very liable to be injured from the ejection of the fluid afterwards, almost as soon as the mistake is discovered, when all the muscles of the throat are spasmodically affected.

For the subjoined notes we are indebted to Dr. A. Ernest Sansom, late house-physician to the hospital:—

James D—, aged thirty-six, admitted May 2nd, 1860. Complained of violent pain in the stomach, occurring at intervals of about ten minutes, and of pain on swallowing. This was referred to a line passing from the top of the sternum downwards to the left side, and was always followed by vomit-

* Taylor on Poisons.