

He was ordered dilute nitro-muriatic acid, ten minims thrice daily, and eight grains of quinia daily. To relieve the diarrhoea, he received suppositories of acetate of lead and opium. During the next few days he gained rapidly, and the temperature-chart showed the declining gradations peculiar to this stage of the disease; thus his temperature on

Dec. 30 was		104° P. M.
Dec. 31	102½° A. M.	103½° P. M.
Jan. 1	102½° A. M.	103° P. M.
Jan. 2	101½° A. M.	102° P. M.
Jan, 3	101½° A. M.	100° P. M.

Jan. 4th the temperature in the morning was 101°, and the patient had a pulse of 96, of good volume, and only slightly heightened respiration, and no cerebral symptoms; yet he died in the afternoon after a convulsion lasting a few moments. During its progress his face became purple, the head was drawn back, the neck swelled; he seemed to be gasping for breath, and struggled so violently that his limbs had to be held by the surrounding patients to prevent his being thrown from the bed.

Passing by the minor details of the case, we notice, first, that the statement of the patient, that he had been ill for nearly three weeks, was confirmed by the temperature observations. The highest point marked was 104°, on the evening of admission; following this, the evening exacerbations, after each morning's fall, showed a declining series. Nor was the improvement to be found only in the vanishing fever heat; there was no fresh eruption of rose-coloured spots, indeed, those noticed upon admission were gradually fading, the discharges were reduced and under control, the tongue was cleaning, and he slept at night without delirium, when, without warning or apparent cause, we notice that he had a violent, general, and rapidly fatal convulsion.

Now let us see if the autopsy explains this unlooked-for result, or is able to throw any light upon the cause of death. In cases of sudden termination of typhoid fever, we naturally think of intestinal perforation, of exhausting internal hemorrhage, or of cerebral effusion; in the present case this is not a subject merely of speculation, as we have the organs before us; and it is to their appearance that I invite your attention.

Autopsy.—The lungs, with the exception of some engorgement posteriorly from hypostatic congestion, are found to be healthy and crepitating throughout. There is no evidence of pleurisy; there are no adhesions or effusion. The heart weighs 10½ ounces; the left side is firmly contracted, the ventricle being empty, the auricle full of fluid blood. The right side seems flabby, the ventricle containing some fluid blood and a white, fibrinous clot, the auricle having fluid contents and no clot. The cavities, walls, except as regards the flabbiness of the right side, and the valves appear healthy.

The stomach shows some congestion of mucous membrane, and holds coagulated milk; the membrane is reddened, and is softer than normal. The peritoneum contains some serous fluid, but exhibits no other sign of disease. The liver is healthy in every respect. The spleen is large and flabby; it weighs 19 ounces, and in section displays a currant-jelly appearance; the tissue breaks readily under pressure. The mesenteric glands generally are enlarged. In the small intestine there is no evidence of ulceration or perforation, but there is marked increase in size in Peyer's patches, and in the solitary glands of the large and small intestines. These look like shot under the mucous membrane; Peyer's patches are very much infiltrated, and darker in colour than the surrounding parts. There is nowhere a sign of perforation.

The kidneys weigh 7 ounces each. The left is large, firm, and irregular. The capsule is thickened, adherent, and on removal leaves a markedly granular surface. Upon section, a urinous odor is noticed the organ is congested, especially in the pyramids, and the cortex appears slightly swollen. A similar condition is found in the right kidney. The pathologist has just given me a report of the microscopic examination of the kidneys in this case, in which he pronounces them to be in a state of granular degeneration. The supra-renal capsules are normal. The brain is rather soft, but is perfectly natural on gross examination.

Now, looking at the post-mortem results, we find in the kidneys alone sufficient ground for the explanation of the convulsion seizure; and its uræmic nature is further rendered most probable by the presence of albumen in the urine, and by the well-known fact of the favouring element of the accumulation in the blood of the products of waste and disintegration of tissue during the fever process. But before we adopt this view, let us consider what other causes may determine convulsions in typhoid fever; and thus see whether any of them is likely to have been at work in this particular case.

A patient may have a convulsion from overloading the stomach. Every hospital surgeon knows that the friends of the sick man have ways of eluding the most Cerberus-like of gate-keepers, and are thoroughly happy if they can convey quantities of apples and peanuts to the patient to fill his stomach with when the attention of the nurse is diverted. The smuggled articles may have all the proverbial flavour of forbidden fruit, but they often lead to disastrous consequences. Among these may be convulsions, and death may occur as the direct result of paralysis of a heart already weakened by fever. We have a parallel in the way feeble children perish from convulsions brought on by indigestion. In the case we are discussing there was some suspicion of improper food having been given; but at the autopsy none was found in the stomach.

Now as to the direct influence of the typhoid