use of iodide of potassium, strychnia and atropia.

Dr. Bateman mentions the following causes as having been assigned by different writers for the occurrence of aphasia, viz.: wounds, tumors, embolism, nervous shock, epilepsy, neuralgia, hysteria, reflex action, sun-stroke, extreme cold, narcotic poisoning, blood-poisoning, uremia, alcoholism, plumbism, snake bites, &c.

[To be continued.]

ULTIMUM MORIENS.

By THOMAS WATERMAN, M.D., Boston.

I AM induced to report the following autopsy by reading the accounts of irritability of the auricle on pages 68 and 75 of the present volume of the JOURNAL. The term "*ultimum moriens*," as applied to the right auricle of the heart, originated with Galen, thus showing the very ancient recognition of its *post-mortem* irritability.

The case occurred in 1867, when I was surgical interne at the Massachusetts General Hospital. A. T. B., æt. 50, an employée on the Boston and Providence Railroad, was run over by a freight train at 6 o'clock, P.M. He died on his way to the hospital, at half past 6. There was a compound comminuted fracture of the right thigh just below the trochanters, the limb being almost severed from the body and only hanging by a portion of integument at the posterior part. The left leg was completely smashed between the knee and ankle into many pieces.

I opened the chest at 9 o'clock (two hours and a half after death). The heart was quite warm, and there were two drachms of clear serum in the pericardial cavity. On scratching or pricking the right auricle with the point of the scalpel, it contracted from the base towards the apex of the auricular appendage in an undulatory manner, the fringes of the appendage rising into sharp serrations and then subsiding again after the contracting wave had passed by. When the undulation reached the apex it rose upward, twisted upon itself with a jerk, and then instantly fell back upon the aorta from which it rose. No contraction took place, except upon the application of artificial stimuli. On scratching the apex, the wave started from this point and ended at the base, though not invariably, the contraction beginning usually at the junction of the auricle with the ventricle and ending at the apex, whenever

the stimulus was applied. There was a small, horizontal muscular projection on the auricular appendage about the size of a pea, and resembling a miniature heart, which contracted when irritated and became shortened in its long diameter from base to apex and widened laterally, behaving like the single ventricle of the frog's heart as it contracts in a horizontal position after death.

The rest of the heart was now thoroughly squeezed, to drive out any blood that might remain in its cavity, but no contractile response was elicited from the left auricle or the ventricles by the application of stimuli, electric or otherwise. At half past 9, one pole of the magneto-electric battery being applied to the nape of the neck and the other to the right auricle, a continued current of electricity was passed through. The auricle then began to contract quite rhythmically—from base to apex, as before described—at the rate of seven beats in the minute. During the next hour the auricle ceased to contract throughout its whole extent, the area of contracting tissue radiating from the point of stimulation becoming smaller and smaller in size as the irritability of the heart diminished. The heart, when opened, contained no blood, clotted or fluid, nor did the aorta. At 11, the right auricle was cut away from the rest of the heart, and at half past 11 (five hours *post mortem*) it still occasionally contracted feebly just at the point of irritation.

Electricity produced no effect upon the muscles of the arms, even when the poles were inserted into the substance of the muscle at its origin and insertion. On striking the biceps of either arm a sharp blow with the hand, a ridge of muscle arose, raising the skin over it, and the forearm became very slightly flexed. On repeating the same manœuvre to the muscles on the ulnar aspect of the forearm, a muscular ridge arose, the fingers were flexed and the hand was slowly pronated. A sharp blow also excited peristaltic movements in the intestines.

CITRIC ACID IN AFTER-PAINS.—Dr. J. B. Chagnon, in the *Canada Medical Journal* for May, recommends citric acid for the pains following labor, and declares that it has never failed in his hands. He gives five grains in two or three ounces of water every five hours. It acts as a nervine, and as a preventive of inflammation.—*Pacific Medical and Surgical Journal*.