

past year he was using mostly distilled water as a drink, which he sometimes drank copiously. He took Turkish baths from time to time. Oct. 8th, 1896, 2 quarts of urine was passed in 24 hours;—yellow, hazy, slightly acid, 1013 (sp. gr.), urea 5 grs. to the oz.; traces albumen in the filtered urine. No red corpuscles, abundant pus. After exercise there was in addition red blood corpuscles and fibrinous clots. At this time his health was not so good, and he consented to an operation. He had not taken his regular gymnastic exercises, but nevertheless he observed blood in the urine from time to time; but there was no pain, only a feeling of uneasiness in the right side, and at no time was his attention drawn to the left kidney. There were no vesical symptoms. He would not require to rise in the night more than once to evacuate the bladder.

The operation was performed at the Montreal General Hospital on Dec. 10th, 1896, by Dr. Geo. Armstrong. Ether was administered, but it was over half an hour before he could be anæsthetized, and altogether he was some two hours under its influence. Great difficulty was experienced in removing the calculus; it came away in segments. The patient seemed to be doing fairly well for two days, but then gradually merged into a semi-unconscious, restless, delirious condition, and succumbed six days after the operation. The wound was kept perfectly aseptic; urine flowed from it freely. The amount of urine passed daily from the bladder varied from fifty to sixty ounces, urea six to seven hundred grains. The cause of death was thought to be due to a condition of post-operative mania, rather than to any insufficient elimination of urea. The kidneys were examined post mortem by Dr. Wyatt Johnston, the chief change found being more or less fatty degeneration and some sclerotic changes. There were three large cauliflower-shaped calculi in the right kidney, and thirteen small ones, weighing altogether six hundred and sixteen grains. In the left kidney were found also two similar large calculi and a large quantity of gravel. A chemical examination of the calculi by Professor Ruttan showed them to consist entirely of phosphate of lime, with no evidence of nuclei of uric acid or oxalate.

These cases of nephrolithiasis are always interesting, and often tax the keenest diagnostic powers of the observer