way into each bronchus. The relief was marked and instantaneous. I then placed a double canula in the opening, and secured it there, and gave the child a cupful of milk, which she enjoyed very much. I then left, having instructed the attendants to call me if difficulty of breathing or distress should return.

December 15th, 8 A.M. The child was breathing freely, apparently doing well. She had had a good night, and slept several hours. I removed the inner canula, cleaned, and replaced it. From the time of the operation, I withdrew the antimony, and gave tincture of squill in syrup as an expectorant. I had now to leave town, and did not return for three hours, when I learned that I had been sent for to this child half an hour before. I repaired thither at once, and was told that the child suddenly awoke, appeared distressed for a moment, and then expired. On withdrawing the canula, which was *in situ*, a plug of fibrine followed adhering to it. Did this fibrine, which, no doubt, was a part of the false membrane, make its way into the mouth of the canula, and, in the patient's weak state, destroy her? As I was unable to obtain a *post mortem* examination, owing to the prejudices which people have to this proceeding in country places, I am not prepared to give a satisfactory answer to this question.

At the hazard of appearing prolix, I have related *gradatim* my proceeding with this case; not because anything new has been done, but with a view of placing before my professional brethren the conditions which have been complied with, and the result; and not without a hope that others may ventilate the subject a little by giving the results of their experience.

The operation in this instance ought to have been done earlier; for, as I would not preach precipitation in opening the windpipe of a human being of any age before the necessity was clearly established, so I would not recommend the loss of time when once that condition became patent, for every hour lost here is adding to the impurity of the blood, impairing the nervous energy, and lowering the recuperative powers of the patient.

CASES OF LITHOTRITY.

By WILLIAM THOMAS BELL, Esq., Great Grimsby, late House Surgeon to the London Hospital.

[Continued from page 26.]

CASE II. *Exhibition of Chloroform: Suppression of Urine for Forty-eight Hours; Collapse nearly fatal: Ultimate Recovery.* March 1856. R. T., aged 68, a gentleman of active habits, short stature, with grey hair and sallow pale complexion, had suffered greatly for some years from hæmorrhoids and prolapsus, accompanied with considerable irritation of the bladder, followed by hæmorrhage upon exertion. He came under my care some months ago for hæmorrhoids and prolapsus; a considerable portion of the covering of the prolapsus was ulcerated, from which a free discharge of pus took place. As an application, I ordered a strong solution of nitrate of silver to be applied by means of a camel's hair brush; and astringent injections, as alum, sulphate of zinc, etc.; at the same time carefully regulating the bowels by gentle aperients. There was an open vein at the ulcerated point, to which I applied successfully the actual cautery. As the irritation of the bladder kept increasing, I suspected something more than sympathy between the rectum and bladder or prostate, although the symptoms of stone were not at all conclusive. There was no pain after nor difficulty in passing urine; the stream was slightly forked; there was a frequent desire to micturate, greatly increased by exertion, as walking or riding, with slight uneasiness, although not amounting to pain at the extremity of the penis. The urine was quite clear. There was also hæmorrhage from the bladder upon exertion. The sight of water, or putting his hands into it, increased the irritation, or produced an urgent desire to micturate. He was constantly disturbed at night. My patient was called to London upon business, and, not feeling so well while he was there, consulted an eminent surgeon, who sounded his bladder, but failed to detect a calculus, and attributed his symptoms to disease of the prostate gland, which was enlarged (at the same time giving him a guarded opinion about his having stone). Some years ago, my patient passed a number of small lithic acid calculi; and from that time his bladder has not been quite comfortable.

With these symptoms, I sounded him, and readily found a hard calculus. Taking into consideration his general health, I urged him to have the stone crushed; and to this he readily consented. The stone was very hard, and required great force to break it. The operation was at first performed under chloro-

form; the third was followed by severe rigors, urgent and continued vomiting, and collapse, which were combated by stimuli, warmth, etc. After the fourth operation under chloroform, the same train of symptoms followed, in an aggravated form. I was hastily summoned to his residence, and found him in a state of collapse, and suffering violent pain in the pubic region, which led me to suppose that the bladder had given way from some cause. After this, he had total suppression of urine for forty-eight hours; his tongue became much furred; he was unable, or nearly so, to speak, or to notice anything that was going on around his bed; he was sensible when roused. Pulse small and intermitting, and scarcely perceptible.

The treatment adopted was the warm bath, at a proper time; after the collapse had passed off, dry cupping to the loins, turpentine over the lumbar regions, sinapisms to the pit of the stomach, and large enemata of warm water thrown up into the colon by means of a long tube. His sickness and hiccup persisting, I gave him creasote in one drop doses every four hours, and brandy and soda water occasionally. He was ordered a light farinaceous diet. With these alarming symptoms, my father and myself considered him dying.

After total suppression for forty-eight hours, he passed urine with several fragments of calculus; prior to this, I carefully examined the bladder, and could not detect any urine in it, and my patient never once had the desire to pass any after he rallied from his depressed state; he attributed his symptoms to the *chloroform*, and urged that other operations, if necessary, should be performed without it.

There was no hæmorrhage after any of the operations from the bladder. On some occasions, after injecting the bladder prior to an operation, it was found so very intolerant that the operation had to be postponed until the following day.

After the urgent symptoms succeeding the fourth operation, I left the patient alone for three weeks until he recovered his strength. I administered quinine, and ordered a generous unstimulating diet, gentle out-door exercise in his close carriage, a hip bath occasionally, and barley or linseed water *ad libitum*.

At each successive operation very little was done at once. A few fragments were crushed as quickly as possible; then the lithotrite was withdrawn; and this I repeated at his urgent request about every third day when circumstances would admit of it. From this time to the termination of his case not one bad symptom arose; a large quantity of hard fragments were passed; his bladder and rectal symptoms subsided, and he made a good recovery, and was able in July or August to take a month's tour on the continent with enjoyment and comfort.

REMARKS. The first point of interest in this case is the sudden collapse succeeding the fourth operation under chloroform; he required a good deal of this anæsthetic before getting sufficiently, although in not one instance perfectly, under its influence, to allow of the operation being performed. The next point is the marked effect of chloroform, always producing vomiting and rigors; and none of the symptoms arising during the after operations, where it was not used; hence I have no doubt that it was the cause of his urgent and nearly fatal symptoms. The vomiting was insuperable, and the hiccup continuous for hours, and was relieved for a time by creasote in one drop doses, and ice to suck, with counterirritation by sinapisms over the pit of stomach. He took very little medicine, occasionally an aperient in the form of pill, and a little liquor potassæ, with tincture of henbane at his pleasure; he drank largely of diluents, as barley water and milk; he had some slight difficulty in passing the fragments, some of them remaining in the urethra for some hours. The suppression was no doubt from sudden chill, and checked skin action; but at first I feared he was suffering from renal calculi, although the lumbar pain was not severe. About three weeks was allowed to pass by before attempting another operation, to restore the secretions, and to recruit his health; the fragments of calculus were very hard, and some pieces were of considerable size; at the first attempt to crush it great difficulty was experienced, requiring all the force I could use with Fergusson's lithotrite. I have little doubt that it was a flat calculus, and broke in a star direction; the fragments readily broke up afterwards. He had a horrible disgust for physic. He was a capital patient, and rendered me every assistance at the operations. It is about seven months since he had the last operation performed, and he has not suffered any inconvenience from the bladder since; he can take horse exercise, walk, and shoot with comparative comfort. I feel confident that, had lithotomy been performed in this case, he would never have rallied from the shock of operation. On the whole, about ten operations were performed. My patient found the hot hip bath of great service during treatment.