phthisis, or, as we might now prefer to call it, acute inflammatory tuberculosis.

DRIFFIELD COTTAGE HOSPITAL.

TOTAL SUPPRESSION OF URINE FOR FOUR DAYS; NEPHROLITHOTOMY; RECOVERY.

(Under the care of Dr. J. L. BELL and Mr. ALFRED PARKIN.)

CASES of recovery from total suppression of urine are so seldom recorded that it is worth while to put on record the following instance. The case operated on by Mr. Clement Lucas¹ is perhaps one of the best-known examples of the value of nephrotomy in suppression of urine due to calculus. In that case one kidney had been excised four months before for calculous disease, and when the patient presented himself again with suppression the other kidney was examined, a large calculus found, and removed with the best results. Sometimes, however, the stone is of small size and has become impacted in the ureter lower down beyond reach from the lumbar wound. In such cases operation has yielded very good results. Even when the stone has passed into the lower part of the ureter its removal has been successfully accomplished. No patient should be permitted to die without exploratory operation when calculous obstruction is suspected, for if the calculus is not found in the renal pelvis an opening into the pelvis will suffice to give exit to the retained urine, the resulting fistula being necessarily kept open. The literature of surgery now records recoveries after the removal of stones from the ureter following dilatation of the urethra and suprapubic cystotomy with further incision of the ureter. Stones have also been removed through the rectum and through the vagina, whilst higher in the ureter direct incision after stripping up the peritoneum, or after incision of the peritoneum in front and again over the ureter, has been successfully practised; therefore no case can be regarded as beyond the help of the skilled surgeon. The successes which have been attained in the surgery of this part of the body during recent years have been as brilliant as those attained in any part of the body.

A man aged fifty-six years had, on and off, suffered from pain in both loins for years. One year ago he passed some blood in the urine and as the pain at this time was mainly confined to the right side he was advised to have that kidney explored, but declined. After this the pain left the right side and began to be more persistent on the opposite side, but he did little for it besides taking an occasional bottle of medicine. On Dec. 18th, 1895, he was seized with severe pain in the left loin, and called in his medical man who relieved the pain. He was then seized with a severe attack of sickness, and began to feel weak and drowsy. Four days later he was seen by Dr. J. L. Bell, who made arrangements for his removal to Driffield Cottage Hospital. No urine was passed from the onset of the pain, and none could be obtained by the passage of a catheter on several occasions. When seen by Mr. Parkin on the fourth day at the hospital the man was in a drowsy condition; he answered questions tardily, and often got confused before finishing a sentence. He had no pain, and only wished to be left alone, as he felt so weak. On examination of the loins there was slight tenderness to pressure on the left side, but no definite swelling. The tongue was dry and furred. The pulse was 90, full and strong. The body, which was very muscular, was perspiring freely. Under chloroform the bladder was found to be empty, and examination by a sound was negative. The left renal region was explored by an oblique incision, and the kidney when reached was found to be enlarged, hard, and of a dark colour. Incision of the cortex was followed by a free discharge of urine and most profuse hæmorrhage, which was so severe that it appeared as though the life of the patient was threatened. Examination of the interior of the kidney revealed no stone, and as the organ was too deeply situated to allow of the pelvis being reached in this way the wound in the kidney was firmly plugged with a sponge to control the hæmorrhage, sutures being of no use for this purpose, as they at once cut through the very soft kidney substance. The pelvis was explored from behind, and with some difficulty there was removed a conical uric acid calculus, measuring one and a half inches by one inch, which was impacted in the top of the ureter by its small end. The wound was sewn up and the patient returned to bed in a

collapsed condition. Free drainage for urine was supplied at the posterior end of the wound. At the end of forty-eight hours the renal plug was removed; this was not followed by any hæmorrhage. A most copious discharge of urine took place after the operation, as much as four pints per diem being the estimated quantity. On Dec. 26th about ten drachms of clear urine were passed by the urethra, and this quantity gradually increased until by Jan. 14th, 1896, the lumbar wound had healed. A sinus formed four days later, but this closed on Feb. 1st, and since then the urine has all passed naturally in good volume and healthy in character. Convalescence was delayed by an irreducible right inguinal hernia becoming strangulated on March 13th, but the strangulated portion was reduced under chloroform, further treatment in the condition of the patient at that time not being thought desirable. The man is now quite well and strong and follows his usual avocation. There was at no time any trouble with the wound, which healed by primary union.

Remarks by Mr. PARKIN.—This case resembles in some particulars one described by me in THE LANCET² in which recovery took place after operation at the age of seventy-four years. It is obvious that if the obstruction can be removed sufficiently early there is every hope of a rapid recovery, whereas, by medical treatment alone the prognosis is utterly hopeless in such cases. The diagnosis of the proper side to explore in obstructive renal suppression is often very difficult. The patient's mental state renders his answers to questions unreliable; his friends frequently confuse the right with the left side; so that, in the absence of a definite tumour the only reliable point is the elicitation of tenderness on deep pressure over the renal region. Even then mistakes are possible. The kidney itself in both my cases was so congested that the most alarming hæmorrhage took place on opening it up. It would be better to make straight for the pelvis as the most likely place for the impaction of a calculus. Recovery, as a rule, is rapid, the mental state taking a few days only to return to its normal condition; and this is coincident with an unusually large excretion of urine, which does not interfere with rapid healing of the wound, provided only that the muscles are carefully sutured together. In this instance, convalescence was delayed by an obstinate cystitis, caused probably by frequent catheterism before the operation. From the history of the patient one would conclude that the opposite kidney had been destroyed or rendered functionless by calculi of a similar nature; the hypertrophy of the left kidney noticed at the operation, as distinguished from the enlargement by distension, quite bears out this view.

Reviews and Notices of Books.

The Composition of Expired Air and its Effects upon Animal Life. By J. S. BILLINGS, M.D., S. WEIR MITCHELL, M.D., and D. H. BERGEX, M.D. Washington: The Smithsonian Institution. 1895.

ALTHOUGH physiologists have for more than fifty years been investigating the effects of re-breathed air on animals they are not yet by any means unanimous in their conclusions. For instance, Brown-Séquard and d'Arsonval published numerous memoirs in French periodicals from 1887 to 1894 asserting that expired air has the power of producing toxic phenomena. They found that the moisture condensed from the breath of men and animals was fatal to rabbits which had received intra-vascular or subcutaneous injections of doses varying from 12 to 40 c.c. They also experimented with rabbits kept each in separate vessels, several of which were successively connected with one another in series, and they found that when air was slowly drawn through the apparatus the last animal in the series always died first, the reason being, in their opinion, because it had inhaled the impurities communicated to the air by all the preceding animals of the series. Some of these results were confirmed by Merkel in Germany, but all of them were apparently contradicted by the experiments of Dastre and Loye, von Hofmann-Wellenhof, Lehmann, and Jessen, and in England by those of Dr. J. S. Haldane and Dr. J. Lorrain Smith (*Journal of Pathology and Bacteriology*, 1892-93). In

¹ THE LANCET, Jan. 17th, 1891, p. 144.

² THE LANCET, Sept. 16th, 1893.