

lumbar region and ran along the course of the ureter to the testicle of the same side. The testicle retracted during a paroxysm of pain. At the end of the above time he felt somewhat better, and took a position as street-car driver, working steadily for seven months. During this time he was quite free from pain, and, thinking himself well, he returned to his former occupation. About six weeks later, however, the pain returned, with the same characteristics, but without any hemorrhage, and he was forced to leave work for a short time. After a few days he started work again and continued till spring, when he had a similar attack. He worked on till October, when he received a severe shaking up by the upsetting of a load of wood. Since this time pains have been more frequent and severe, and he has not worked steadily. In April, while ploughing, he had a second hemorrhage, lasting about three days, and since that time he has done no work. Medicinal treatment was tried by several physicians, but gave no relief. The paroxysms were usually relieved by hot fomentations, but towards the last these were useless.

*Present Condition:* Has a healthy appearance, but says he is considerably weaker than he was a year ago. The gait is peculiar, resembling, in some respects, that seen in morbus coxæ, but all the movements of hip-joint are free and painless, and the characteristic signs of joint disease are absent.

*Urinary System:* No pain on micturition; frequency normal; on deep abdominal palpation over the right kidney some tenderness can be observed, but no dilatation of pelvis or ureter.

*Examination of Urine:*

*Gross:* Quantity, normal; color, ditto; reaction, slightly acid; specific gravity, 1030; slight flocculent precipitate on standing.

*Chemical:* Trace of albumen, due to the presence of pus.

*Microscopic:* Pus cells; ten to fifteen in a field; oxalate of lime crystals about same number; red blood corpuscles, a few.

*Nervous System:* Does not sleep well on account of pain. When lying on left side he has a dragging sensation, and when on right a feeling of soreness. He also complains of considerable frontal headache and dimness of vision.

*Alimentary System:* Tongue slightly coated and appetite only fair; otherwise normal. Rectal analysis showed the prostate and vesiculæ seminales normal.

Dr. McPhedran pointed out that the symptoms were very typical. The seat and direction of the pain, the retraction of the testicle, the hæmaturia and pyuria, without the presence of mucus, taken with the other characters, are very significant, and from the abundance of oxalate of lime crystals it is fair to judge that the calculus is composed of oxalate of lime; the severity of the pain would also indicate that. It must not be forgotten that the pain is not necessarily referred to the side on which the calculus is located.

*The diagnosis* of calculus of the right kidney seemed so clear that the patient was referred to Dr. I. H. Cameron for operation, and on March 26th Dr. Cameron, assisted by Dr. Primrose, made a lateral lumbar incision exposing the kidney. On palpation nothing abnormal could be felt. A needle was then introduced, and, after some search, the point came down on a substance giving a clear click and a firm feeling of resistance. A limited incision was made in the kidney substance over the position of the stone and forceps applied, but it was only with great difficulty that it could be dislodged. It was firmly imbedded in the kidney structure towards its upper extremity, and projected partly into the pelvis, the projecting part being covered with the mucous lining of the part. When removed it weighed sixty-two grains, had a distinct capsule which came away with it, and, as would be expected from the urinalysis, was composed of oxalate of lime.

Further examination revealed no more calculi. The wound was flushed with sterilized water at 110° F., a drainage tube inserted, and the wound closed by superficial sutures. A dressing of iodoform, with Keith's preparation (carbolic acid, 1 part; glycerine, 7 parts), and large pads of absorbent gauze were applied, and the patient sent to bed.

The shock of the operation was considerable, requiring free use of spiritus vini gallici and  $\frac{1}{2}$  grain of strychnia hypodermically. For two or three days urine discharged freely from the drainage tube, but from this time it rapidly diminished, and at the end of a week scarcely