

A CASE OF SIMULTANEOUS FRACTURE OF THE PATELLÆ.<sup>1</sup>

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A SHIP'S steward, aged 30 years, was admitted to the Cardiff Infirmary under my care on Dec. 19th, 1908, with the following history. On August 12th, while on board ship at sea, he was carrying dishes down the ladder from the bridge deck to the main deck. Tropical rain was falling and the steps and rails of the ladder were wet and slippery. His face was away from the ladder because of the dishes he was carrying. On one of the first three or four steps one foot slipped and he fell. He let go the dishes, threw his body backwards to save himself and the toes of his feet catching in the steps he came to the bottom of the ladder in the position shown in Fig. 1, both his knees striking the deck hard at the same moment. There was no medical man on board. The captain found both knee-caps broken, had him placed in his bunk, applied back-splints with footpieces and brought the broken fragments as near together as he could with plaster. The patient was kept thus until 19 days later, when the ship reached Durban, Natal. He went at once to hospital. Splints were continued for a week and then plaster-of-Paris was applied. He began to get about and on Oct. 29th left the hospital and

right. Pain in the knees was almost constant. Both patellæ were fractured transversely, the upper fragment in each case being the larger. The separation was 1 inch on the right side and  $\frac{1}{2}$  inch on the left side. The knees were fixed by adhesions in almost extended positions. Operation was delayed in order to cure boils on the legs.

On Jan. 11th, 1909, operation was undertaken. Both fractures were freshened and wired, vertical skin incisions being made. The wounds were closed in layers. The adhesions were broken down prior to wiring. Bending after wiring

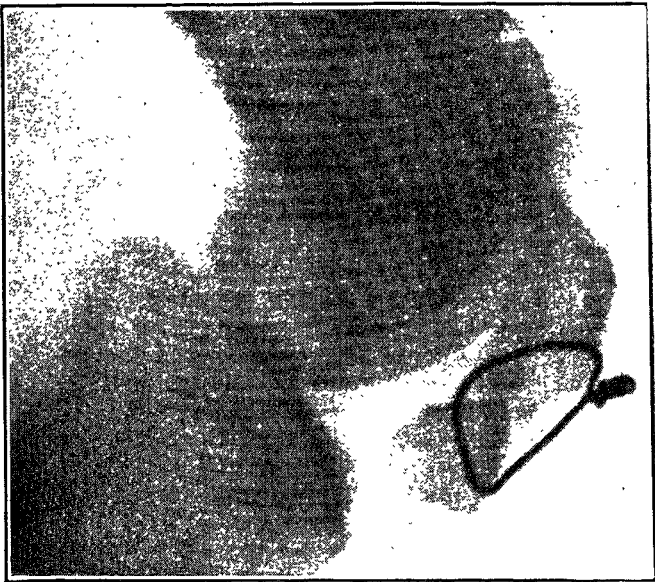
and before closing the wounds could not be done as the wires began to cut through. The wounds were healed in a week. The after-progress was slow in spite of massage and movements. The patient left the hospital on March 20th, using crutches. On June 9th he was still using crutches ("compensationitis") but could walk without them and bend either knee to nearly a right angle. M. Lucas-Championnière, who was in Cardiff, kindly examined him and pointed out that union was not firm in the right patella. On Sept. 6th he had discarded crutches and sticks. He walked well with a natural gait, his walk showing no evidence of his injuries. He had got fatter, was cheerful (in contrast with a former depressed condition), and was about to resume work. He still came downstairs clumsily, putting both feet on one step before proceeding to the next, but when encouraged and shown he managed to come down in the ordinary way. Both patellæ were firmly united and he could bend both knees to well beyond a right angle. The twisted ends of the wires could no longer be felt as

FIG. 1.

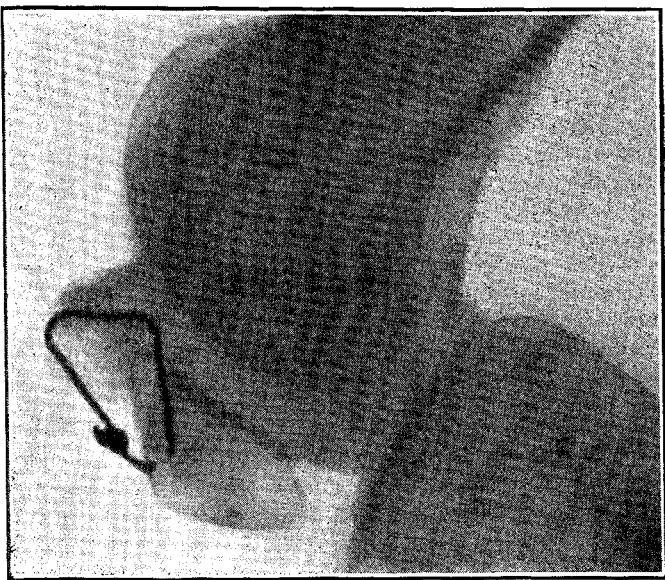


Sketch showing dramatically the manner in which the knees struck the deck.

FIG. 2.



Radiogram of right knee.



Radiogram of left knee.

came to England. On admission to the infirmary he could walk feebly with sticks. He had a great sense of insecurity, the slightest twist or slip caused him to stumble or fall; he held on to everything within reach. There was fluid in both knees and tenderness over both joint areas, particularly the

formerly. He had a pair of strong good legs and was quite satisfied with his condition.

A number of X ray photographs were taken by Dr. Owen Ll. Rhys in the electrical department of the infirmary. Those reproduced (Figs. 2 and 3) were taken on Sept. 14th and show the knees flexed but not quite to their fullest extent. In the left knee the wire, as frequently happens, having done its duty as a splint, is broken.

<sup>1</sup> A paper communicated to the Cardiff Medical Society, Oct. 12th, 1909, when the patient was shown.

*References.*—1. M. Lucas-Championnière. This surgeon, whose experience of fractured patellæ is very large, on the occasion of his recent visit to Cardiff kindly told me that he had seen and treated three cases of simultaneous fracture. They occurred a good many years ago and he did not remember the mode of production in any. Two were in women and one in a man. All were old cases when operated on and in all one patella was sutured and not the other. As far as he knew all three patients had, eventually, useful legs. 2. Astley Cooper.<sup>2</sup> "A young woman was brought into my house in her father's arms and he said, 'I am obliged to carry her, for she has lost the use of her legs, having broken both her knee pans eight months ago. ....'" Recovery ensued gradually. 3. Hamilton:<sup>3</sup> "I have seen a double transverse fracture or a fracture of both patellæ in a man, æt. 22, who fell from a third-storey window, striking, he says, upon his knees." 4. Mansell Moullin:<sup>4</sup> "The patient is conscious of something breaking before he falls and it sometimes happens that in the desperate effort to save himself the other patella snaps across as well. I have known this occur to a man in the first stride of a race." 5. Scudder:<sup>5</sup> an illustration is given of fracture of both patellæ, but there is no reference in the text.

*Rarity of the injury.*—There is little reference in surgical literature to simultaneous fracture of the patellæ, although fracture of the two bones at different periods and refracture of one bone are commonly mentioned. Simultaneous fracture appears to be a rare injury.

*Mode of production.*—I believe that in this case the fracture was due to direct violence. The very acute flexion of legs on thighs would bring the patellæ to the deck first and not the tibial spines. The patellæ would be held tight-braced against the femur ready to crack across directly they hit the deck. The patient's own statement is that he felt nothing snap before alighting and thinks that the blow on the deck caused the fractures. It is, of course, possible to take the view that in throwing his body backwards the man snapped both patellæ. The case must be regarded as a special one. As regards ordinary single transverse fractures, there seems in most cases to be no good reason for giving up the older view that each is due to the snapping of the bone across the condyles of the femur—i.e., to indirect violence. This is often clearly supported by the history of the case.

Cardiff.

<sup>2</sup> On Dislocations and Fractures of the Joints, 1842 edition, p. 230.

<sup>3</sup> Fractures and Dislocations, 1871 edition, p. 435.

<sup>4</sup> Surgery, 1891 edition, p. 474.

<sup>5</sup> The Treatment of Fractures, 1903, p. 347.

## LARGE VESICAL CALCULUS, WEIGHING 26½ OUNCES, REMOVED BY SUPRAPUBIC LITHOTOMY; RECOVERY.

BY W. W. HEARNE, M.D., CH.B. MELB.

THE very large size of this calculus and the complete recovery of the patient will perhaps lend interest to the following notes.

A married woman, aged 39 years, consulted me in March of this year complaining of great pain in the pelvic region, foul-smelling urine containing much pus and frequently blood in considerable quantity, and frequent painful micturition necessitating her rising often as many as eight or nine times at night, with consequent loss of sleep and impairment of general health. She had been ill about 12 years, and had become rapidly worse during the last six months. Examination revealed a large calculus almost entirely filling the bladder.

On April 15th Dr. J. H. Nattrass anæsthetised the patient, and the bladder having been washed out with boric lotion and its distension attempted with a few ounces of the same fluid, with Mr. A. Honman assisting, I opened the bladder in the suprapubic region with the object of removing the calculus by that route after having reduced its size by fragmentation. When exposed, however, all attempts at the latter procedure were rendered futile by the size and density of the stone, the largest lithotrite failing to grasp or even chip pieces off it; and as the use of the chisel and mallet appeared to offer too great risk of damage to adjacent viscera, it became necessary to remove the mass entire. It was obviously impossible to extract the stone through the limited space available below the reflection of the peritoneum, and the necessary room was obtained by carefully stripping that membrane upwards off the fundus of the bladder for about two inches. Even then it was necessary to incise the viscus from the extreme upper limit right down to the neck deeply behind the symphysis pubis. Venous hæmorrhage in the latter region was free but was readily controlled. After extraction of the stone the bladder was well washed out and the incision in it was closed above and below with catgut sutures, a rubber drainage-tube being inserted at about the middle; gauze drainage was provided in the prevesical region behind the symphysis, the ends of the gauze and the tube being brought out through the lower extremity of the abdominal wound, which was elsewhere closed. After four days the tube was removed from the bladder, which throughout the period of convalescence was irrigated twice daily with boric lotion and later with hydrogen peroxide solution (1 in 4), urotropin (10 grains) being also given by the mouth. On May 21st, as there was still a small urinary fistula, the walls of the latter were refreshed and brought together with a deep mattress suture, which six days later had to be removed as it was cutting through. After two days more the urine was coming through the fistula again. A self-retaining rubber catheter was then introduced per urethram and the bladder was washed out night and morning with boric lotion, followed by silver nitrate solution of strength increased from 1 grain to 5 grains in 4 ounces of water. At the end of eight days the fistula was permanently closed (nine weeks from the day of operation) and a week later the patient left the hospital. For another week the catheter was worn at night only and the irrigation of the bladder was continued night and morning. She is now, more than three and half months after operation, quite well, with her wound firmly healed and no cystitis. Her urine is retained perfectly and is passed easily at normal intervals, and she says that she was never better in her life, and "feels as if she could do the whole work of the house"; her weight, which prior to the operation had fallen to 7 stones 12 pounds, is now 9 stones.

The calculus is nearly spherical, measuring 12½ inches in its longest, and 11½ inches in its shortest, circumference, and in the recent state weighed 26½ ounces.\* A large area of its surface is thickly studded with sharp projecting spines, which, no doubt, were responsible for the hæmaturia from which the

\* Dr. Hearne sent us a photograph of the stone, but from the measurements given it will be seen that a reproduction of this at the actual size could not have been included in our column. The reader will easily imagine a spiculated blob about 25 per cent. larger than a cricket ball.

**THE PARENTS' NATIONAL EDUCATIONAL UNION.**—The Thirteenth Annual Conference of this union will be held at the Friends' Meeting House, Bull-street, Birmingham, from Nov. 15th to 19th inclusive. On the opening day the members of the conference will be received by Mrs. George Cadbury, who will give an address of welcome, to which Earl Lytton will reply. In the evening of the same day an address will be given by Sir Oliver Lodge. Among the papers already announced for discussion are: "Environment in Relation to Nervous Stability," by Dr. Helen Webb; "Educational Ideals of the Renaissance and Ourselves," by Dr. Geraldine Hodgson, D. Litt.; "Direct and Indirect Moral Teaching," by Miss Bradley; and "The Education of the Imagination," by Canon J. H. B. Masterman. Papers are also announced on the subject of university education by the Bishop of Birmingham and Mr. C. J. Fleet, the Governor of McGill University. In connexion with the conference and under the auspices of the Co-educational Public Schools Trust the co-education of boys and girls will be discussed under the presidency of Professor Hughes, Dean of the Faculty of Arts and Professor of Education in the University of Birmingham. During the course of the conference visits will be made to the village of Bournville and to the new University buildings at Bournbrook. Among the principal objects of the union are the assistance of all classes to understand the best principles and methods of education, and the education of public opinion on the subject of the training of children. Further particulars of the conference and tickets (price 3s. 6d.) can be obtained from Miss Parish, 26, Victoria-street, London, S.W.