

be taken throughout the operation. An assistant should then introduce an India rubber bag into the rectum, the bag used by Peterson was pear-shaped, but Sir William MacCormack has recommended in preference an elongated-sausage form, which resembles in shape the distended rectum. At this stage it is best to pass a flexible catheter into the bladder, as catheterism is rendered difficult after the rectum is distended. About twelve ounces of water is now injected into the rectal bag; this not only raises the prevesical fold of peritoneum, but also steadies the bladder during the operation. The bladder must be emptied of urine, washed out and then moderately distended with weak solution of boracic acid and warmed to the proper temperature; the quantity injected may be 6, 8, or 10 ounces, determined by the resistance offered. The method of injecting the bladder recommended by Erichsen is the most convenient and safest: A soft catheter is passed, to which an India rubber tube is attached, with a funnel at the end. Through this the solution of boracic acid is poured into the bladder and withdrawn again by lowering the tube below the table. In this way the bladder must be repeatedly washed out. Finally, by raising the funnel from two to three feet above the body, the bladder may be sufficiently distended if the patient be sufficiently under the anæsthetic. Forcibly injecting a fixed amount into the bladder is not free from danger, and has been known to cause rupture of the viscus. The catheter is now withdrawn and an India rubber band fastened around the penis to prevent escape of the fluid by the urethra. A rounded tumor dull on percussion may now be felt above the pubes. A straight incision is made, commencing three inches above the symphysis pubis, and carried down to the symphysis. Then the linea alba is divided, either on a director or by a direct stroke of the knife. The recti muscles are separated by the handle of the knife or a director. When the fascia transversalis is reached, it is picked up in a forceps and slightly notched, a director is then passed through the opening and it is divided. The wound should now be held widely open by retractors, the fat is to be carefully removed from the anterior surface of the bladder. Sir Henry Thomson recommends a sharp-pointed ivory instrument for the purpose,

the difficulty here apprehended is the presence of several veins, which may be abundant in this region. Sir Wm. MacCormack prefers to divide the fat with a knife, the peritoneum may be protected during the incision by passing the left forefinger into the upper angle of the wound and pressing it up. The veins can be secured without difficulty. If the fat be merely pushed aside, the bladder wall may be insufficiently exposed, the fat may also be bruised, and thus becomes more prone to septic influences and to infiltration. When the bladder surface is exposed it is readily recognized by the arrangement of its muscular fibres. Two silk sutures are passed, through the muscular coat only, at the upper portion of the exposed surface of the bladder, a scalpel is then plunged into the bladder, cutting from between the sutures downwards towards the pubes, making the incision of sufficient length to permit of extraction of the calculus without force and if possible without bruising the edges of the bladder wound. When the opening is made, fluid escapes and the bladder collapses, but the two sutures which have been passed are used to prevent its falling into the pelvis, and to keep the edges of the opening apart so that the forefinger may be passed into the bladder. During these manipulations great care must be exercised to avoid disturbing the cellular tissue between the bladder and the pubes. If this be injured, the danger of infiltration subsequently is greatly increased, or suppuration may result. The prevesical fold of peritoneum may present at the upper angle of the wound when the bladder collapses, and were care not taken it might be injured. The calculus should now be extracted by means of short lithotomy forceps, or with a lithotomy scoop and a finger. The forefinger should now be passed into the bladder in order to explore the interior and see if any other calculi be present. Any bleeding points in the edges of the bladder wound must be secured, and then the cavity is washed out with a 3 per cent. solution of boracic acid. A question of great importance is now to be decided, and that is with regard to the treatment of the incision into the bladder. It has been advised that in young persons, those in whom the urine is healthy, and the bladder wall also healthy, an attempt should be made to secure