A MODIFICATION OF THE USUAL METHOD OF PERFORMING PUBIOTOMY [1]

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UP to the present time two methods of performing pubiotomy have been described and are in common use: The semi-open method of Doederlein, and the subcutaneous method of Bumm. Each of these possesses certain advantages and disadvantages. In the Doederlein method, the bladder is separated by the finger from the back of the pubic bone after first making a small incision above the bone to admit the finger. In this way injury to the bladder by the needle is avoided, but at the same time a large area is opened behind the bone in which blood may collect and infection subsequently occur. In the Bumm method, on the other hand, the needle is passed upward from below under the guidance of a finger in the vagina. There is no incision made in the skin and no separation of the bladder from the bone and consequently there is less risk of infection.

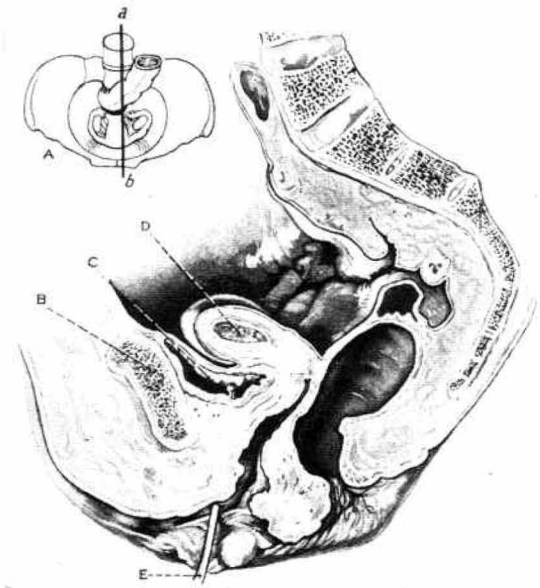

Fig. 1. Section through the pelvis passing through the usual site at which the pubic bone is divided (Liepmann). *A*, Line of section; *B*, cut surface of pubic bone; *C*, bladder; *D*, uterus; *E*, pointer in urethra.

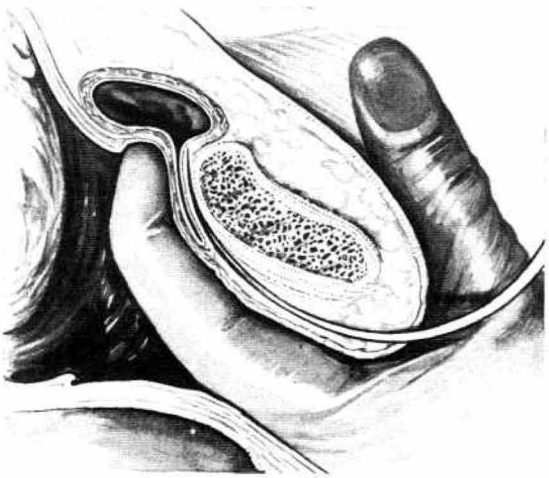

Fig. 2. Diagram to show the manner in which the guiding finger in the vagina can push the bladder into the track of the needle.

[1] The following is a short addendum to an article on "The Radical Cure of Pelvic Deformity" which appeared in Surgery, Gynecology and Obstetrics, for August 1919, 117.

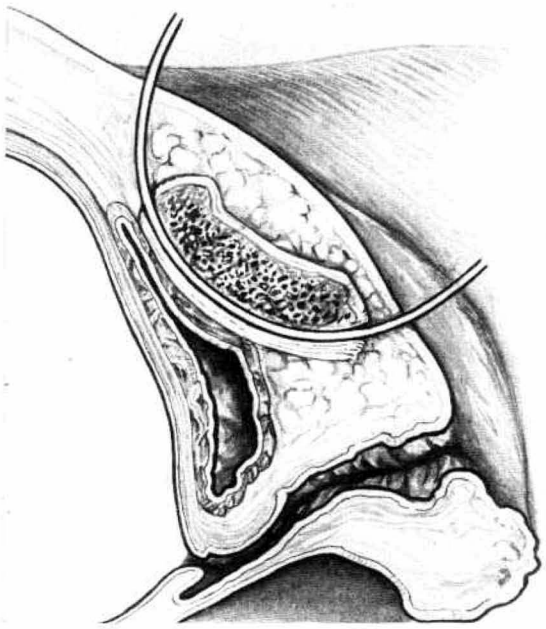

Fig. 3. The passage of the needle in the modified operation.

There is, however, a considerable risk of injuring the bladder with the needle.

The ease with which the bladder can be penetrated by a needle passed upward from below can be seen if the relations of the bladder and bone are examined in Figure 1, while the diagram in Figure 2 shows very plainly the manner in which the guiding finger in the vagina may actually push the bladder forward in the direct path of the needle. It may be said that, if the needle is kept between the periosteum and the bone, it cannot enter the bladder. This is, of course, true, but it is impossible to construct a needle with such a curve as to enable it to keep within the periosteum as the upper surface of the bone is reached, even if it has done so all along the posterior surface. The upper part of the bone is the danger point, and the danger is exaggerated by the guiding finger in the vagina.

Accordingly, I have for the past few months been in the habit of performing a slight modification of the Doederlein operation, as follows:

A small incision is made in the skin and fat directly above the point of proposed entry of the needle. This incision is carried down to the bone, and the periosteum is cut through where it passes off the upper surface on to the posterior surface. The point of the blunt Doederlein needle is then pushed through this opening and downward

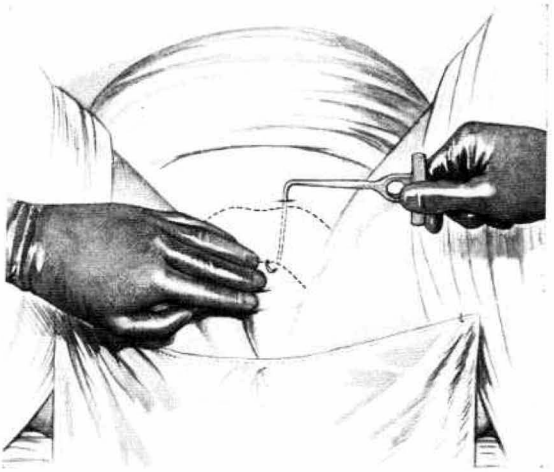

Fig. 4. Diagram to show the correct track of the needle.

beneath the periosteum (Fig. 3). The finger is only passed into the vagina, as a guide, as the needle reaches the lower edge of the bone, and even then it is not essential (Fig. 4).

The only point on which special care is necessary is in making the incision in the periosteum. If this is made directly on top of the bone, it will not be possible to detach the periosteum with the needle, as it is too firmly attached at this point. If, however, the incision is made just over the upper surface of the bone, it is usually easy to cause detachment.

It may further be said in favor of this method that, even if the needle fails to keep behind the

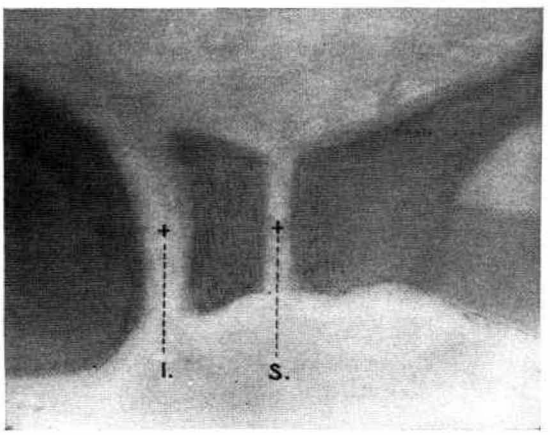

Fig. 5. Skiagram of the pubic bone after a double pubiotomy. The arrow points to the first incision with complete ossification. *I*, the second non-ossified incision; *S*, the symphyis.

periosteum, the danger of penetration of the bladder is only a fraction of what it is when the needle is passed up from below, as in the Bumm method.

I also wish to take this opportunity of reproducing a roentgenogram of the pubic bone of Mrs. G. (Cases No. 17 and 23) in my previous article (Fig. 5). This woman had a pubiotomy done by me on the left side (to which the arrow points) in 1913. She was kept very quiet after the operation with the result that bony union followed and that she was unable to deliver herself at her next confinement in 1916. In consequence pubiotomy was performed by Dr. Purefoy. This time bony union did not occur, with the result that at her next confinement in 1919 she was delivered with the forceps of a living 8½ pound child the forceps being applied on account of uterine inertia and not on account of any mechanical difficulty.