TRANSABDOMINAL EXTRAPERITONEAL SECTION
OF THE OBTURATOR NERVE TRUNK

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A popular method of interrupting section of the obturator nerve is to
section its many peripheral branches high in the medial thigh as
originally described by Stoffel\(^6,7\) in 1910. However, obturator nerve
section in the thigh is frequently not as effective as section of the trunk
higher because of accessory obturator nerves and branches of the main
obturators trunk which may originate within the abdomen and pursue a
variable peripheral course.

Selig\(^4,5\) in 1913 and 1914 reported an anatomical study demonstrating the
possibility of low intrapelvic extraperitoneal section of the obturator trunk.
A number of authors (reviewed by Chandler and Seidler\(^2\) and by Wischnewsky\(^3\)) have reported on the use of this technique. Chandler and Seidler\(^2\) reported 84 cases in 1939, in which the nerve was approached through a
lower abdominal incision, just lateral to the lower border of the rectus
muscle. In cases of bilateral section of the nerve these authors made a trans-
verse skin incision with vertical deep dissection on the lateral side of each
rectus abdominis muscle. Bonnet\(^1\) described a lateral iliolumbar approach
through which the obturator nerve was located high beneath the iliopsoas
muscle. The disadvantage of this technique is the lengthy incision and deep
dissection. Recently, Freeman\(^3\) reported the combined section of the obtu-
rat or and femoral nerves in paraplegics, through a single vertical incision
which crossed Poupart’s ligament. The approach to the obturator nerve, as
described by this author, was essentially the Selig-Chandler approach. The
femoral nerve was sectioned below Poupart’s ligament.

During the past two years, we have employed a convenient transab-
dominal extraperitoneal approach to the obturator nerve high and laterally
within the pelvis at the level of the anterior superior iliac spine. The details
of surgical technique are described below and illustrated in Fig. 1.

The advantages of this operation are:

(1) The nerve trunk is sectioned high enough to include all the branches.

(2) The nerve is easily located in a field where it is unlikely to be con-
fused with other structures.

(3) The operation has the advantage of all extraperitoneal approaches in
being bloodless and non-shocking.

(4) The femoral and other nerves of the lumbosacral plexus can be sec-
tioned either through the same approach or an upward extension of it.

(5) The anatomic repair of the muscle-splitting incision allows the
patient to rise the same day of operation without danger of postoperative hernia.

We have performed 23 bilateral sections of the obturator nerve and 3 unilateral sections with no complications. Sixteen of the bilateral nerve sections have been in paraplegics in whom section of the femoral nerve was also performed through the same muscle-splitting incision. In these cases the femoral nerve was located in its downward course between the iliac and psoas divisions of the iliopsoas muscle, also at the level of the anterior superior spine. One small incision and one dissection suffice for the section of these two nerves on a single side.

![Operative Technique](image)

**Fig. 1**

**Operative Technique**

When both obturator nerves are sectioned, the skin is divided by a transverse lower abdominal incision. When a single nerve is sectioned, a slightly oblique 4 in. lower right or left quadrant skin incision is made. The abdominal muscles are then split in the direction of their fibers, as in the classical McBurney incision. As the preperitoneal fat is reached, the peritoneum is separated without opening and is pulled medially by stick-sponge dissection at the level of the anterior superior iliac spine. Posterior and medial dissection along the anterior surface of the iliacus fascia in the internal iliac fossa at the same level exposes the external iliac artery at the pelvic brim. The artery and the accompanying vein are carefully freed from the