

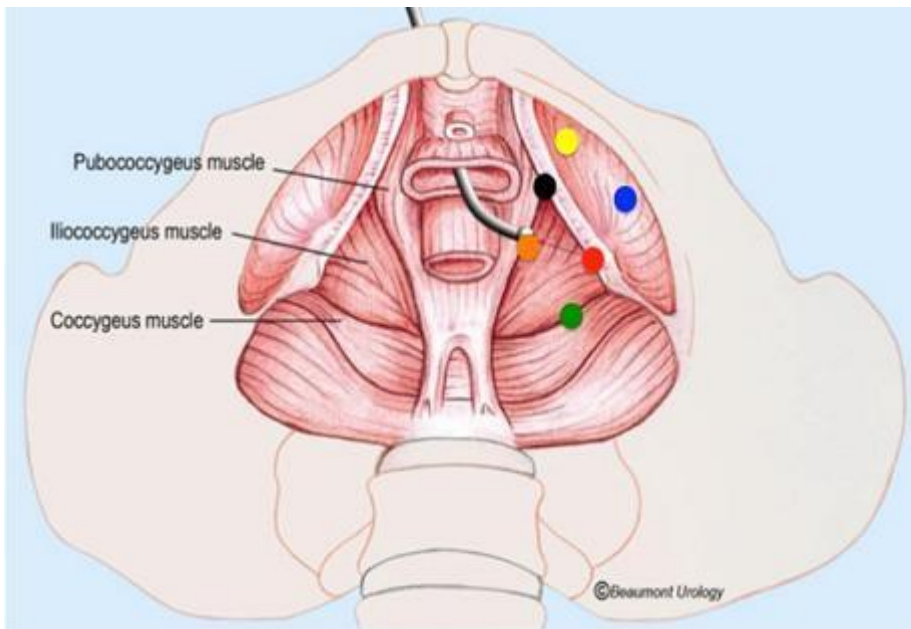
TRANSVAGINAL PELVIC FLOOR MUSCLE INJECTION TECHNIQUE: A CADAVER STUDY

Hypothesis / aims of study

Women with pelvic floor dysfunction can present with tender areas on vaginal examination which can be treated with pelvic floor muscle injection. We performed pelvic floor injections in a cadaver model with different color pathology dye to determine the accuracy of drug delivery, location of fluid injected or fluid dispersion after injection.

Study design, materials and methods

Following our standard template, pelvic floor muscle injections were performed on 2 fresh cadaveric pelvises using a curved nasal cannula guide and 7-inch spinal needle, Figure. Two sets of injections were performed at the 1, 3, and 5 o'clock positions. One set is proximal, at the level of the ischial spine, and one set is distal, immediately behind the pubic bone, both passing through the vaginal wall into the pelvic floor muscles (Figure 1). Each injection used different colored pathology dye diluted in 2 cc of saline. At 1 o'clock distally the needle was advanced 1 cm beyond the end of the cannula guide and at all other positions advanced 2 cm. The first pelvis was dissected to examine dye penetration. Based on these results we modified our technique and repeated the injections on the second cadaver. We dissected the second pelvis and compared our findings.



Results

The 1 o'clock proximal and distal injections infused the obturator internus and externus near the insertion at the ischiopubic ramus. The 3 o'clock injections stained the mid-body of the pubococcygeus and puborectalis. The distal 5 o'clock position was too deep and stained the fat of the ischiorectal space, while the proximal 5 o'clock injection was near the ischial spine and stained the area of the pudendal nerve. Our goal at the distal 5 o'clock position was to stain the iliococcygeus muscle, so for the second pelvis we shortened the needle depth from 2cm to 1cm beyond the cannula tip. In our second dissection the distal 5 o'clock injection had the same distribution, entirely in the fat of the ischiorectal space.

Interpretation of results

This transvaginal pelvic floor muscle injection template delivers medication of choice to the proximal and distal obturator internus, externus, levator ani muscles and to the pudendal nerve. We could not reliably inject the pelvic floor muscles at the distal 5 o'clock site even after modifications.

Concluding message

This is the first study to locate the distribution of pelvic floor muscle injections in a cadaver model. We confirm that 5/6 of our standard template injections infused the targeted pelvic floor muscles.

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** NONE