

Pelvic floor function and childbirth

To the Editors: Klein et al. in their article on pelvic floor function after childbirth (Klein MC, Janssen PA, MacWilliam L, Kaczorowski J, Johnson B. Determinants of vaginal-perineal integrity and pelvic floor functioning in childbirth. *Am J Obstet Gynecol* 1997;176:403-10) claim that they were "unable to find another study that used the same perineometer that we had" and that "we were unable to find any published pregnancy or prepregnancy perineometry norms." Thus their literature review failed to discover our studies using an identical instrument in which we validated the reproducibility and established normative data in nulliparous women¹ and examined the effects of delivery on surface electromyography performance.² Likewise, they describe our prospective, controlled study of midline episiotomy³ as a "retrospective study." Pelvic floor function after childbirth is an important field and I appreciate the contributions of Klein et al. I would encourage more thoroughness in their review of the literature.

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REFERENCES

1. Thorp JM Jr, Bowes WA Jr, Droegemueller W, Wicker H. Assessment of perineal floor function: electromyography with acrylic plug surface electrodes in nulliparous women. *Obstet Gynecol* 1991;78:89-91.
2. Thorp JM Jr, Jones LG, Bowes WA Jr, Droegemueller W. Electromyography with acrylic plug surface electrodes after delivery. *Am J Perinatol* 1995;12:125-8.
3. Thorp JM Jr, Bowes WA Jr, Brame RG, Cefalo RC. Selected use of midline episiotomy: effect on perineal trauma. *Obstet Gynecol* 1987;70:260-2.

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Reply

To the Editors: We are pleased to respond to Thorp, recognizing that his work, which was indeed prospective, suggested the link between median episiotomy and third- or fourth-degree tears. With larger numbers, within our randomized controlled trial of episiotomy we were able to confirm that in nulliparous women median episiotomy appears causally related to almost all such trauma.¹

Sadly, we were unable to benefit from the work of Thorp et al. cited in Thorp's first reference. We see now that these authors used a similar instrument and clearly studied and wrote about pelvic floor functioning. But they titled it "perineal floor" functioning. Such a structure does not exist. Thus our MEDLINE search under "pelvic floor" failed to locate the article.

These authors were unable to demonstrate a beneficial effect for Kegel exercises in pelvic floor functioning and speculated that this might have been due to their small numbers. They studied only 41 patients, showing great variability and range. But in our study of 459 nulliparous women we came to a similar conclusion,² and unre-

ported for a similar number of multiparous subjects as well.

Unfortunately, our search failed to pick up their reference 2 because of the closeness in time between manuscript preparation and publication. In 52 patients at a mean of 46.3 days post partum, they reported results similar to ours with 359 randomized nulliparous and 341 multiparous women¹ and 459 randomized and nonrandomized nulliparous women.² They report, however, that women delivered vaginally had lower flick voltage than those delivered abdominally. In general, we agree, but we found at 3 months post partum in both nulliparous and multiparous women, with use of "flicks" and the more reliable 10-second "holds," that women with an intact perineum had electromyographic voltages similar to those of women with cesarean birth. Progressively lower voltages were found in subjects sustaining second-degree tears, episiotomy, and episiotomy extensions. Thus, with sufficient power, we were able to sort out the apparent protective effect of attempting to assist birth with an intact perineum. Thorp failed to cite this 1994 study¹ in the 1995 publication and apparently missed our 1992 randomized controlled trial,³ providing normative electromyographic pelvic floor data at 36 weeks' gestation and 3 months post partum.

To really understand pelvic floor functioning, we need a prospective study among women intending to become pregnant and followed up through pregnancy, post partum, and beyond. Because we share research interests with Thorp, we will have to communicate more directly and consider collaboration.

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REFERENCES

1. Klein MC, Gauthier R, Robbins J, Kaczorowski J, Jorgensen S, Franco E, et al. Relation of episiotomy to perineal trauma and morbidity, sexual dysfunction, and pelvic floor relaxation. *Am J Obstet Gynecol* 1994;171:591-8.
2. Klein MC, Janssen P, MacWilliam L, Kaczorowski J, Johnson B. Determinants of vaginal-perineal integrity and pelvic floor functioning in childbirth. *Am J Obstet Gynecol* 1997;176:403-10.
3. Klein MC, Gauthier RC, Jorgensen SH, Robbins J, Kaczorowski J, Johnson B et al. Does episiotomy prevent perineal trauma and pelvic floor relaxation? *Online J Curr Clin Trials* [serial online] 1992 Jul 1;2 (Doc No. 10); [6019 words; 65 paragraphs]. 1 figure 6 tables.

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Mechanism of action of intrauterine contraceptive devices

To the Editors: Spinnato (Spinnato JA II. Mechanism of action of intrauterine contraceptive devices and its relation to informed consent. *Am J Obstet Gynecol* 1997;176:503-6) seeks revision of intrauterine contraceptive device (IUD) informed consent to emphasize the device's putative postfertilization inhibition of uterine implantation,