

Female Incontinence Rises With Obesity, Diabetes

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AMSTERDAM — Women who are obese, have diabetes, or both should be asked about symptoms of urinary incontinence and other pelvic floor disorders.

That is the take-home message from two recent studies, one presented in a poster at the annual meeting of the European Association for the Study of Diabetes (EASD) and the other published in the journal *Diabetes Care*. Both studies—one a case-control study from a group in Turkey, the other a cross-sectional analysis from the Kaiser Permanente database—demonstrated that urinary incontinence (UI) is more common in women with diabetes, but that a large measure of that association may be due to obesity.

Dr. Pinar Topsever, of the department of family medicine at Kocaeli (Turkey) University, presented data from 954 women seen in her primary care setting, of whom 344 had diabetes (the majority with type 2). The women with diabetes were older (49 vs. 32 years), more overweight (body mass index 28 vs. 25 kg/m²), had more previous pregnancies (3 vs. 2), and had more deliveries (3 vs. 2).

When asked by questionnaire if they experienced “any kind of urinary leakage,” a total of 42% of the women with diabetes responded affirmatively, a “striking figure,” compared with the 14% of controls, Dr. Topsever said during her presentation at the EASD meeting.

After adjustment for confounders such as age, reproductive history, diabetes complications, and other comorbidities, the odds ratio for having UI among the diabetic women remained a significant 2.9. Other independent predictors of UI were body mass index (BMI) greater than 22.5 kg/m² (OR 1.1) and a history of more than one pregnancy (OR 1.6).

But if you don't ask, women may not tell. In fact, her primary care group had decided to do this study because, “We realized that a lot of female patients in primary care had urinary incontinence but didn't complain about it. [The information] just came out when we were inquiring during our normal doctor-patient conversation.” The study was undertaken because the prevalence of diabetes is high in Turkey—about 8% of the population—and diabetic neuropathy is thought to contribute to UI among people with diabetes, she explained.

The situation appears to be quite similar here in the United States, judging by data from 3,962 female health plan participants surveyed by Jean M. Lawrence, Sc.D., M.P.H., of Kaiser Permanente Southern California, Pasadena, and her associates (*Diabetes Care* 2007;30:2536-41).

Just as with the Turkish study population, the 393 women with diabetes (10%) were significantly older than the rest of the group (64 vs. 56 years), had higher BMIs (32 vs. 27), and were more parous (3 vs. 2 deliveries). They also were more likely to have had a hysterectomy (38% vs. 27%), and to be black (13% vs. 9%). More than half (56%) of the women with diabetes were obese (BMI of 30 or greater).

On the Epidemiology of Prolapse and Incontinence Questionnaire, which assesses a variety of pelvic floor disorders (*Int. Urogynecol. J. Pelvic Floor Dysfunct.* 2005;16:272-84), overall prevalences were 15% with stress urinary incontinence, 13% with overactive bladder, 25% with anal incontinence, and 35% reporting any of those four pelvic floor disorders.

Diabetes and obesity both strongly predicted each and all of the pelvic floor disorders, but obesity was a stronger predictor for

each. Compared with women who were neither obese nor diabetic—and after adjustment for a long list of confounding factors including age, race/ethnicity, mode of delivery, parity, menopause status, smoking status, and neurologic disease—the odds ratios for having stress urinary incontinence were 3.67 for those who were both obese and diabetic, 2.62 for obese nondiabetic women, and 1.81 for nonobese diabetic women.

For having any pelvic floor disorder, those adjusted odds ratios were 2.62, 1.83, and

1.32, respectively. The risk rankings remained in the same order for overactive bladder (2.97, 2.93, and 1.45) and for anal incontinence (2.09, 1.45, and 1.33), they reported.

There is a significant correlation between BMI and intra-abdominal pressure, suggesting obesity may stress the pelvic floor secondary to a chronic state of increased pressure. And weight loss has been shown to improve incontinence in obese women, the researchers noted. ■

