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PREVALENCE AND DEGREE OF BOTHER OF PELVIC FLOOR DISORDERS IN OBESE WOMEN SEEKING MEDICAL WEIGHT REDUCTION COMPARED TO COMMUNITY-DWELLING WOMEN

Hypothesis / aims of study

To assess the prevalence and degree of bother related to pelvic floor disorders (PFD) in a managed care population of obese women enrolled in a medical weight loss program compared to a community-dwelling population of obese women. Our hypothesis was that obese women actively seeking weight reduction in a medical clinic would be more bothered by PFD than community-dwelling obese women.

Study design, materials and methods

A validated questionnaire [1] identifying women with PFD including pelvic organ prolapse (POP), stress urinary incontinence (SUI), overactive bladder (OAB), and anal incontinence (AI) was administered to a convenience sample of obese (body mass index [BMI] ≥ 30 kg/m^2) women enrolling in a large managed care sponsored, multidisciplinary medical weight loss program. Data was compared to a cohort of obese community-dwelling women enrolled in a large epidemiologic study from the same large health maintenance organization [2]. The degree of bother for each PFD was assessed using a 100 mm visual analog scale (VAS). T tests were used to compare mean VAS scores between those enrolled in the medical weight management program and community-dwelling women. Chi-squared and Mann Whitney U tests were used to compare the demographic and clinical characteristics of the two groups, including age, race, BMI, parity, mode of delivery, pelvic surgery, depression, diabetes, neurologic disease, pulmonary disease, urinary tract infection (UTI, > 3 per year), hormone and menopausal status, smoking, chronic lifting and caffeine use. Significant variables between the two groups were entered into logistic regression models to assess the relative impact of each PFD on enrollment in a medical weight management program while controlling for confounding variables. These are reported in adjusted odds ratios (OR) with 95% confidence intervals (CI). Associations with a two-sided p-value of less than 0.05 were considered significant. Power calculations were made assuming that women enrolled in a medical weight management program would have at least a 10 mm higher degree of bother on VAS compared to community-dwelling women, assuming a baseline VAS of 65 mm. With these assumptions, 128 women in the medical weight loss program had greater than 99% power to detect a significant difference at the 0.05 level.

Results

The mean age (± standard deviation) of the entire obese cohort (n=1,283) was 55.7 ± 14.8 years, and the mean BMI was 35.8 ± 5.7 kg/m^2. The race and ethnicity of the obese women were 60% non-Hispanic white, 22% Hispanic, 13% African-American, 3% Asian/Pacific Islander, and 2% other or unknown race. Overall the prevalence of PFD in obese women was: POP 8%, SUI 24%, OAB 22%, AI 29%, and any one or more PFD 48%. The prevalence of any one or more PFD in the group of women enrolled in the medical weight management program (n=128) was not significantly different than the community-dwelling women (n=1,155) (42% versus 48%, p=0.19) (Table 1). Of all the PFD, only the prevalence of OAB was significantly higher in community-dwelling women compared to women enrolled in a medical weight loss program (23% versus 14%, p<0.05). There were no significant differences in degree of bother for any of the PFD between the group of women enrolled in a medical weight loss program and community-dwelling women (Table 1). Univariate analysis revealed significant differences in age, race, BMI, parity, mode of delivery, depression, diabetes, neurologic disease, pulmonary disease, recurrent UTI, hormone and menopausal status, and chronic lifting between those enrolled in the weight loss program and community-dwelling women. Multivariate analysis controlling for these confounders revealed that enrollment in the weight loss program was positively associated with depression (1.83, 1.34-2.93), BMI (1.09, 1.05-1.13), and negatively associated with age (0.96, 0.95-0.98), and OAB (0.49, 0.25-0.97), p<0.05.

Interpretation of results

In this population of obese women, enrollment in a weight loss program was positively associated with depression and BMI, but not with PFD. Although obese women enrolling in a weight loss program experienced a high prevalence of and degree of bother related to PFD, they were not more bothered by these conditions than community-dwelling women. That is, PFD may not be a major reason why women seek medical weight reduction.

Concluding message

Pelvic floor disorders are common and associated with significant bother in obese women. Rather than the presence of PFD per se, younger age, higher BMI and depression were the major associates of enrollment in a medical weight management program in this obese cohort. Nevertheless, providers caring for obese women must recognize the co-existence of obesity and pelvic floor dysfunction, and future study must evaluate PFD as a possible indication for weight reduction services.

References

[1] Int Urogynecol J Pelvic Floor Dysfunction (2005) 16(4);272-84.
[2] Obstet Gynecol (2006) 107(6);1253.

Table 1. Prevalence and degree of bother (mean VAS, mm ± SD) for pelvic floor disorders in obese women enrolled in a medical weight loss program (n=128) and community-dwelling women (n=1,155).

CONDITION	OBESE ENROLLED IN WEIGHT LOSS PROGRAM n = 128 n (%)	OBESE COMMUNITY-DWELLING n = 1,155 n (%)	*p* VALUE
PELVIC ORGAN PROLAPSE	10/128 (8)	99/1155 (9)	0.77‡
VAS	63.5 ± 19.2	71.5 ± 19.7	0.22*
STRESS URINARY INCONTINENCE	25/128 (20)	280/1144 (24)	0.21‡
VAS	69.7 ± 14.2	65.6 ± 14.5	0.18*
OVERACTIVE BLADDER	18/128 (14)	253/1118 (23)	0.03‡
VAS	73.1 ± 10.7	78.5 ± 11.4	0.05*
ANAL INCONTINENCE	33/128 (26)	340/1155 (29)	0.39‡
VAS	42.7 ± 19.1	42.0 ± 17.2	0.83*
ANY PELVIC FLOOR DISORDER	54/128 (42)	531/1100 (48)	0.19‡

‡ Chi squared analysis. *T-test. VAS, visual analog scale.

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Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Kaiser Permanente Southern California Institutional Review Board
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes