

Objectives- To determine, in women without advanced pelvic organ prolapse with or without a uterus, 1) whether successful incontinence pessary fitting can be predicted by specific POP-Q measurements, and 2) whether POP-Q measures predict pessary size.

Methods- In a multicenter study, 446 women with stress urinary incontinence (SUI) and POP-Q stage ≤ 2 were randomized to 1 of 3 treatment arms: 1) incontinence pessary, 2) behavioral therapy, or 3) combined. This analysis includes 252 women assigned to receive an incontinence pessary. Pessary fitting was typically performed by trained nurse practitioners, nurses, or physical therapists. Pessary fitting was considered unsuccessful if the provider obtained an inadequate fit after at least 3 attempts, the participant found the pessary painful, or the participant did not plan to use the pessary after fitting. The size and type of the pessary was used to obtain measures of the diameter of the ring or dish including the knob (bolster). Linear and logistic regression were used.

Results- Mean age and body mass index were 49 years and 29 kg/m², respectively. 94% were parous. 3% reported previous prolapse surgery, 5% previous UI surgery, and 22% previous total hysterectomy. 235 women (93%) were successfully fitted with an incontinence ring (n=122) or incontinence dish (n= 113); 17 women (7%) were unsuccessfully fitted. The median number of pessaries attempted was 2. Hysterectomy, genital hiatus (GH, with or without strain) and GH/TVL (total vaginal length) ratios did not predict unsuccessful fitting ($p>0.05$). However, mean TVL was greater in women successfully fitted (9.6 cm compared to 8.8 cm in those unsuccessfully fitted; $p=0.007$). Neither total vaginal length (for women with and without a cervix), point D in women with a cervix, or point C in women without a cervix, predicted final pessary diameter ($p>0.05$).

Conclusions- The vast majority of women with SUI without advanced pelvic organ prolapse can be successfully fitted with an incontinence pessary by trained non-physicians. Women with a shorter vaginal length were less likely to be successfully fitted, but specific POP-Q measures were not helpful in determining incontinence pessary size. Our data suggest that the trial and error method of incontinence pessary fitting cannot be made more scientific with specific vaginal measures.