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THE LONG TERM EFFECTS OF BARIATRIC SURGERY ON FEMALE URINARY INCONTINENCE.

Hypothesis / aims of study
The aim of this study is to determine the impact on urinary incontinence of women at twelve months post bariatric surgery.

Study design, materials and methods
A prospective cohort study was performed of all patients undergoing bariatric surgery between January 2008 to January 2017, who had urinary incontinence prior to their operation. During this period 481 patients underwent bariatric surgery, of which 366 were female. Incontinence was assessed using the International Consultation on Incontinence Questionnaire- Urinary Incontinence short form (ICIQ-UI SF).

Results
41% (151/366) of women filled out the incontinence questionnaire pre-operatively, and of these 40% (61/151) completed the questionnaire at one year post-operatively. The mean age of participants was 50 (SD=8.39). The mean pre-operative weight and BMI were 136kg (SD=21.3) and 51kg/m^2 respectively (SD=7.1). The mean post-operative weight drop was 49kg (SD=21kg), and percentage excess weight loss was 74%. 66% underwent laparoscopic gastric bypass, and the remainder underwent sleeve gastrectomy. 34% reported symptoms of stress incontinence (SUI), 21% reported symptoms of overactive bladder (OAB), and 44% reported symptoms of mixed incontinence. The cure rates post-operatively for SUI, OAB and mixed incontinence, were 41%, 38% and 48% respectively, however this did not reach statistical significance. 61% of women wore pads on a daily basis pre-operatively compared to 36% postoperatively, which showed an overall 80% improvement ($p < 0.01$ using chi square test). 44% of women reported complete resolution of their symptoms. Using the ICIQ-UI SF, the mean score was reduced by 4.8 (SD=5), from 9.3 (SD=4.4) pre-operatively to 4.5 (SD=5) post-operatively.

Interpretation of results
There were high cure rates for SUI, OAB and mixed incontinence, with 44% reporting complete resolution of symptoms. The effect of bariatric surgery on quality of life based on the ICIQ-UI SF was significant, with an overall 80% improvement.

Concluding message
Bariatric surgery results in a clinically significant long-term improvement in urinary incontinence, with a significant cure rate at one year post bariatric surgery. The improvement in severity score, based on the Incontinence Questionnaire used, did not correlate to reduction in post-operative BMI (correlation coefficient -0.11).

References
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