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Impact of bariatric surgery on urinary incontinence in morbidly obese individuals

Prasanna Ramana Arumugaswamy[1] · Vitish Singla[1] · Prabhjot Singh[2] · Rajeev Kumar[2] · Sandeep Aggarwal[1]

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Abstract

Background There is scanty evidence on the impact of bariatric surgery on urinary incontinence (UI) in the Asian population.
Methodology Patients who underwent bariatric surgery from June 2018 to June 2019 were screened using the International Consultation on Incontinence Questionnaire-Urinary Incontinence-Short Form (ICIQ-UI-SF) questionnaire. Patients having UI were identified and followed until 1 year of surgery using the ICIQ-UI-SF. These were classified as having stress, urge, or mixed type of UI. The prevalence, change in scores, and the number of pads used were compared at baseline and at follow-up.
Results A total of 148 patients underwent bariatric surgery of whom, 41 patients (M = 2, F = 39) had UI. Stress incontinence was seen in 70.7%, 19.5% had urge incontinence, and rest had the mixed type. Using logistic regression, it was found that female gender was the most important predictor of having UI (OR: 8.33). The prevalence of UI decreased from 27.7% at baseline to 8.1% at 6 months and 3.4% at 12 months. The mean ICIQ-UI-SF score improved from 8.76 (SD = 3.2) at baseline to 0.66 (SD = 2.1) at 12 months of follow-up. The proportion of patients with UI using any number of pads decreased from 92.7% at baseline to 9.8% at 12 months. There was a decrease in the number of patients having moderate to very severe UI from 35 (85.4%) at baseline to 2 (4.9%) at 12 months. Proportion of patients showing resolution was highest among the stress incontinence group at 96.5%. Presence or absence of comorbidities did not significantly influence the ICIQ-UI-SF scores.
Conclusion Bariatric surgery leads to profound improvement in UI in obese individuals which is well sustained until 1 year of follow-up. Resolution rates might be higher in Asian population.

Keywords Bariatric surgery · Urinary incontinence · Asian · ICIQ-UI-SF score

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✉ Sandeep Aggarwal
sandeep_aiims@yahoo.co.in

Prasanna Ramana Arumugaswamy
prasannaramana326@gmail.com

Vitish Singla
vitishaiims@gmail.com

Prabhjot Singh
drprabhjotsingh@gmail.com

Rajeev Kumar
rajeev.urology@aiims.edu

[1] Department of Surgical Disciplines, All India Institute of Medical Sciences, Ansari Nagar, New Delhi 110029, India

[2] Department of Urology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi 110029, India

Obesity is an independent and significant risk factor for urinary incontinence (UI). Odds of UI are two to three times higher in patients with body mass index (BMI) ≥ 30 kg/m^2 compared to those with BMI < 24 kg/m^2 [1]. People with severe obesity have increased intra-abdominal pressure and, hence, increased urinary bladder pressure and urethral hypermobility, resulting in an increased incidence of UI. Each 5-unit increase in BMI above normal is associated with 40% to 70% increased risk of prevalent incontinence and 30% to 60% increased risk of incident incontinence over 5 to 10 years [2, 3]. Preoperative prevalence of UI in the morbidly obese has been reported to be 37 to 49% in females and 1 to 24% in males [4, 5].

Weight loss results in improvement of UI mainly by decreasing intra-abdominal pressure. Even 5 to 10% weight loss has been shown to improve UI and quality of life [6]. Bariatric surgery results in significant improvement in UI [7]. Despite several studies [4, 8–13] which have reported on the impact of bariatric surgery on UI, the problem of UI has