The Efficacy and Safety of Bariatric Surgery in Patients with Previous Kidney Transplantation: A Systematic Review and Meta-Analysis

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Introduction: Obesity is associated with adverse outcomes in end-stage renal disease (ESRD) and those with prior kidney transplantation (KT). Bariatric surgery (BS) is an effective solution to obesity. The authors aim to summarise the evidence for the efficacy and safety of BS in those with KT.

Method: We performed a systematic review and meta-analysis to determine the efficacy and safety of BS in patients with ESRD awaiting KT. A literature search of MEDLINE, EMBASE and Web of Science was conducted from inception to April 2021. The methodological quality of selected studies was assessed using the Newcastle-Ottowa tool. Our primary outcome was change in BMI, with secondary outcomes including adverse events, graft outcomes and KT listing rate.

Results: Ten observational studies met the inclusion criteria with a total of 198 patients (45.1% male). Mean change in BMI following BS was -11.0 (-14.9 to -7.1, p < 0.001) within a median follow up time of 30 months (IQR 25 to 139 months). Gastric bypass (49.5%, n=98) was the most common procedure. Mean age at BS was 46.5 years (SD = 5.5) with a mean time from KT to BS of 4.9 (SD = 1.9). The 5-year graft failure rate (Post BS) was 18.6% (n = 7).

Conclusions: This review highlights that BS is both safe and efficacious on patients with a previous history of KT.