



ELSEVIER

SHORT REPORT

# Triggers to offering bariatric surgery in the management of type 2 diabetes



Barbara Depczynski<sup>a,b,\*</sup>, Ann M. Poynten<sup>a,b</sup>,  
Monika Fazekas<sup>a</sup>

<sup>a</sup> Department of Diabetes and Endocrinology, Prince of Wales Hospital, Randwick, NSW, Australia

<sup>b</sup> University of New South Wales, Australia

Received 13 January 2014; received in revised form 24 March 2014; accepted 29 March 2014

## KEYWORDS

Glycaemic control;  
Type 2 diabetes  
mellitus;  
Obesity

**Summary** It is unclear how current guidelines suggesting bariatric surgery as a therapeutic option for management of obesity complicated by type 2 diabetes mellitus are utilised in clinical practice. Of 609 patients with T2DM assessed in this study, 147 had a BMI  $\geq 35$  kg/m<sup>2</sup>; and of these 147, patients where bariatric surgery had been discussed as compared to those where it had not been discussed, had a higher BMI ( $44.4 \pm 6.8$  kg/m<sup>2</sup> versus  $40.3 \pm 5.2$  kg/m<sup>2</sup>,  $p < 0.005$ ). Diabetes related factors did not differ between the two groups.

© 2014 Asian Oceanian Association for the Study of Obesity. Published by Elsevier Ltd. All rights reserved.

There is robust evidence demonstrating improved glycaemic control or even remission of type 2 diabetes mellitus (T2DM) [1–3] to support current endorsement of bariatric surgery as a therapeutic option in the management of T2DM where the body mass index (BMI) is 35 kg/m<sup>2</sup> or higher [4]. It is unclear how in clinical practice bariatric surgery is offered as a therapeutic option in the management

of T2DM. There is often a delay in the progression of diabetes therapy [5,6]. Whether this is the case in discussing bariatric surgery is unclear. The aim of this study was to determine the number of patients in T2DM clinics who meet the BMI criteria for recommending bariatric surgery and what factors may have influenced whether bariatric surgery was discussed during the consultation.

The study population consisted of adult patients attending diabetes outpatient clinics at Prince of Wales Hospital, Sydney, Australia, a tertiary referral hospital. Access to the clinic for review of diabetes management is via referral from the patient's general practitioner. The clinics are

\* Corresponding author at: Diabetes and Endocrinology, Prince of Wales Hospital, Barker Street, Randwick, NSW 2031, Australia. Tel.: +61 2 93824602; fax: +61 2 93824612.

E-mail address:

[barbara.depoczynski@sesiahs.health.nsw.gov.au](mailto:barbara.depoczynski@sesiahs.health.nsw.gov.au) (B. Depczynski).

attended by four medical practitioners including consultant endocrinologists and advanced trainee registrars in endocrinology. Patients with T2DM, aged 18–65 years who attended at least one diabetes consultation were included. Exclusion criteria were the diagnosis of other types of diabetes including type 1 diabetes, the type of diabetes was not documented, BMI was not documented or the medical file was not located. Ethics approval was obtained from South Eastern Sydney Local Health District Human Research Ethics Committee.

Currently, there is no public hospital based bariatric service available in our local health district for patients attending our diabetes clinics. Patients are referred to a bariatric surgeon, at the discretion of their treating doctors. The type of surgery is usually determined by the bariatric surgeon in conjunction with the patient. Usually laparoscopic surgery is performed; types locally available include sleeve gastrectomy, Roux-en-Y gastric bypass and adjustable gastric banding. Any surgery is undertaken in a private hospital. Bariatric surgery procedures obtain a government subsidy, being listed on the Medicare Benefits Schedule, and, depending on the private insurer, there are various degrees of reimbursement from a patient's private medical insurer. With private insurance, there can still be out of pocket costs; however, for a patient without private medical coverage, out-of pocket costs are substantial and may be prohibitive for that person. In 2010, a fledgling bariatric surgery program was commenced in our local health district; around 20 patients underwent bariatric surgery in a public hospital. Pre- and post-admission care (including allied health support) was provided in the private sector. This program is no longer ongoing.

Obesity guidelines current at the time of the study period were used to define the BMI cut off for recommending discussion of surgery as well as defining factors other than BMI that would influence a decision to consider surgery [4,7]. Specifically, the guidelines were used to provide definitions of obesity related co-morbidities responsive to surgery and contraindications to surgery [4,7]. Data from 2011 to 2012 were retrospectively collated from the medical file. Data collected included demographic details; BMI; whether bariatric surgery had been discussed as a therapeutic option (defined as having occurred if documented in the medical file); duration of T2DM; glycated haemoglobin (HbA1c) at entry into the study; type of diabetes therapy; presence of other co-morbidities known to respond to bariatric surgery including hypertension (defined by requirement for antihypertensive treatment or blood pressure reading was

140/90 mmHg or higher during the first consultation), dyslipidaemia (defined by requirement for lipid-lowering therapy), obstructive sleep apnoea (OSA), pulmonary hypertension, obesity hypoventilation syndrome, obesity related cardiomyopathy, non-alcoholic steatohepatitis and osteoarthritis; and presence of contraindications to bariatric surgery (defined as unstable heart or lung disease, advanced liver disease, serious haematological or autoimmune disorder, active psychiatric disorder or cognitive impairment). Whether the patient had been seen by a dietitian previously or referral to a dietitian offered and health insurance status (as documented by clerical staff) were also recorded. Statistical analysis was conducted using a statistics package (IBM SPSS Version 21.0). Data were expressed as mean of raw data  $\pm$  standard deviation or as number and percentages. Unpaired two sided *t* tests or Pearson Chi-square tests were used as appropriate.

609 patients with T2DM aged between 18 and 65 years, attended at least one medical appointment in 2011–2012. 147 (24.6%) patients who attended had a BMI  $\geq$  35 kg/m<sup>2</sup>. There was no difference in the mean age between those with BMI below 35 kg/m<sup>2</sup> or those with BMI 35 kg/m<sup>2</sup> or higher (53.9  $\pm$  9.6 versus 53.5  $\pm$  9.9 years, *p* = 0.93). 51.3% of those with BMI  $\geq$  35 kg/m<sup>2</sup> and 59.9% of those with BMI below 35 kg/m<sup>2</sup> were male. Three patients with BMI  $\geq$  35 kg/m<sup>2</sup> had previously undergone bariatric surgery and were excluded from further analysis.

Amongst the 147 patients with a BMI  $\geq$  35 kg/m<sup>2</sup>, bariatric surgery was discussed with 22 (15%) patients. The mean BMI of those where bariatric surgery was discussed was higher as compared to those where bariatric surgery was not discussed (44.4  $\pm$  6.8 kg/m<sup>2</sup> versus 40.3  $\pm$  5.2 kg/m<sup>2</sup>, *p* < 0.005). There was no difference in age (53.8  $\pm$  10 versus 54.0  $\pm$  10 years, *p* = 0.9) or sex distribution (45.5% males versus 53.6% males, *p* = 0.48) between those where bariatric surgery was discussed as compared to those where it was not discussed. Characteristics of diabetes including duration (9.2  $\pm$  11.1 versus 7.0  $\pm$  6.8 years, *p* = 0.22), control as assessed by HbA1c (8.4  $\pm$  2.0% versus 8.2  $\pm$  4.0%, *p* = 0.80), or requirement for insulin (36.4% versus 37.9% *p* = 0.91) were no different between those where bariatric surgery was discussed as compared to those where it was not discussed. The frequency of any contraindication to bariatric surgery was similar between those where surgery was discussed as compared to those where surgery was not discussed (31.8% versus 40%, *p* = 0.47). The presence of any co-morbidity known to respond to bariatric

Download English Version:

<https://daneshyari.com/en/article/3004120>

Download Persian Version:

<https://daneshyari.com/article/3004120>

[Daneshyari.com](https://daneshyari.com)