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**Paper Accepted\***

**ISSN Online 2406-0895**

**Case Report / Приказ болесника**

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**Mini/one anastomosis gastric bypass in an obese depressive patient**

Мини/једноанастомозно желудачно премошћавање  
код гојазног болесника са депресијом

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**Received: February 12, 2022**

**Revised: February 16, 2023**

**Accepted: March 12, 2023**

**Online First: March 21, 2023**

**DOI: <https://doi.org/10.2298/SARH220212029I>**

\***Accepted papers** are articles in press that have gone through due peer review process and have been accepted for publication by the Editorial Board of the *Serbian Archives of Medicine*. They have not yet been copy-edited and/or formatted in the publication house style, and the text may be changed before the final publication.

Although accepted papers do not yet have all the accompanying bibliographic details available, they can already be cited using the year of online publication and the DOI, as follows: the author's last name and initial of the first name, article title, journal title, online first publication month and year, and the DOI; e.g.: Petrović P, Jovanović J. The title of the article. *Srp Arh Celok Lek*. Online First, February 2017.

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## Mini/one anastomosis gastric bypass in an obese depressive patient

### Мини/једноанастомозно желудачно премошћавање код гојазног пацијената са депресијом

#### SUMMARY

**Introduction** There is a high prevalence of psychiatric disorders in patients who are preparing for metabolic operation especially depression. Mini/one anastomosis gastric bypass (MGB/OAGB) is a bariatric operation with the possibility of complete restoration of the digestive tract or “tailoring” of a biliopancreatic limb if the patient's weight regains.

We present an obese patient with depression who underwent the first MGB/OAGB in Serbia with a follow-up period of one year.

**Case outline** An obese patient with a body weight of 144 kilograms and a body mass index (BMI) of 46.8 kg/m<sup>2</sup> and depression as an accompanying comorbidity, underwent MGB/OAGB with a follow-up period of one year. The operation was performed using the inventor's technique in his presence and the recovery was uneventful. The patient completely stops taking psychiatric therapy, or any other, with no compliance and has completely social restitution. After the follow-up period, he loses 49 kg, actually BMI = 30.9 kg/m<sup>2</sup> and the percentage of excess weight loss (%EWL) is 73.1%.

**Conclusion** In psychiatric obese patients, a metabolic procedure should be carefully selected. MGB/OAGB proved to be a successful bariatric procedure in our patient, leading to remission of depression and discontinuation of psychiatric therapy, but also to a significant reduction in body weight in the period of one year after surgery.

**Keywords:** mini gastric bypass; one anastomosis; depression; metabolic procedure

#### САЖЕТАК

**Увод** Код гојазних пацијената који се припремају за метаболичку операцију постоји релативно висока учесталост психијатријских поремећаја, нарочито депресије. Мини/једноанастомозно желудачно премошћавање (МГБ) је баријатријска процедура код које постоји могућност потпуног враћања односа у дигестивном тракту или продужења жучно-панкреасне вијуге уколико пацијент почне да задобијана телесној тежини.

Представљамо гојазног пацијента са депресијом код кога је урађен први МГБ у Србији и са периодом праћења од једне године.

**Приказ болесника** Гојазан болесник са телесном тежином од 144 килограма и индексом телесне масе (ИТМ) 46,8 kg/m<sup>2</sup> као и депресијом као пратећим коморбидитетом, код кога је урађена МГБ са периодом праћења од једне године. Операција је урађена оригиналном техником уз присуство изумитеља процедуре, а са некомпикованим постоперативним током. Болесник је престао да узима психијатријску или било коју другу терапију, потпуно је без тегоба и са радним и социјалним опоравком. Након периода праћења од једне године, изгубио је 49 kg са актуелним ИТМ 30,9 kg/m<sup>2</sup> и процентом вишка губитка телесне масе од 73,1%.

**Закључак** Код гојазних болесника са психијатријским обољењима метаболичка процедура се треба пажљиво одабрати. МГБ се показао као успешна баријатријска процедура код нашег пацијента, што је довело до ремисије депресије и прекида психијатријске терапије, али и до значајног смањења телесне тежине у периоду од годину дана након операције.

**Кључне речи:** мини желудачно премошћавање; једна анастомоза; депресија; метаболичка процедура

## INTRODUCTION

There is a high prevalence of psychiatric disorders in obese patients who are preparing for metabolic operation [1]. Depression before and after bariatric surgery can affect not only the health-related quality of life but also can endanger surgical procedures and lead to late surgical and nutritional complications [2]. Changes in lifestyle and eating habits may influence different postoperative conditions. It is important to choose an appropriate surgical

bariatric/metabolic procedure after the expertise of a multidisciplinary team, especially psychological examination [3, 4].

Mini gastric bypass (MGB), also known as one anastomosis gastric bypass (OAGB) is a metabolic procedure invented by American surgeon Dr Robert Rutledge. First published results on 1274 cases operated between 1997 and 2001 were promising regarding weight loss and metabolic control on co-morbidities [5]. Later on, other surgeons also published good results [6, 7, 8]. The procedure is completely reversible and could be easily transformed into a stronger malabsorptive operation, with minimal morbidity and mortality [9, 10]. There were concerns about bile reflux, but recently published papers on this subject did not show a significant influence of bile reflux on long-term results [11, 12]. Today, MGB/OAGB is worldwide recognized as a good operation, with comparable results in treating obesity, as well as type 2 diabetes mellitus, even better than Roux en-Y gastric bypass (RYGB) [13, 14]. Bile reflux, as a more prominent problem of operation rarely need to solve by Braun anastomosis or conversion into RYGB [15, 16].

We present a first operated MGB/OAGB obese patient in Serbia with depression and a follow-up period of one year.

## CASE REPORT

A male patient, Caucasian, 26 years old, with a BMI of 46.8 kg/m<sup>2</sup> and with a five-year clinical history of depression. We performed the MGB/OAGB on 28 May 2016 under the guidance of doctor Robert Rutledge, who was a visiting physician at the clinic using his original laparoscopic technique. Five ports were placed in the upper abdomen and after the first stapling at the gastric incisura, a bougie was properly placed against the small curvature and staple line. The stomach was transected along bougie to the gastro-oesophageal junction but several centimetres away from the fat pad. The antecolic biliopancreatic limb was lifted up and 180-200 cm from Treitz ligament, anastomosis between stomach and jejunum was created with 4.5 cm blue cartridge and V-Loc™ device (Figure 1). The patient was discharged from the hospital on a 4th postoperative day with one-month prophylactic anticoagulative therapy (LMH). Regular controls were on first, the second month after the operation, and later on every six months. The result of, body mass index (BMI) and percentage of excess weight loss (%EWL) are shown in Table 1.

This case report was approved by the institutional ethics committee, and written consent was obtained from the patient for the publication of this case report and any accompanying images.

## DISCUSSION

MGB/OAGB is currently the third most frequently performed bariatric procedure in the world with 7.6% [17]. According to the latest consensus conference, MGB/OAGB is an appropriate option for a single-stage procedure in elderly patients, patients with low BMI (30-35 kg/m<sup>2</sup>) and associated metabolic problems, and patients with a BMI greater than 50 kg/m<sup>2</sup>[18].

It is a powerful combination of restrictive and malabsorptive metabolic operation, with only one anastomosis [11]. This feature of the gastric tube (15 to 20 cm long) and one anastomosis gives "non-obstructive" passage of food, without increasing pressure in the stomach [7]. MGB/OAGB is a completely reversible procedure [9]. Restoration of the digestive tract could be done with a combination of laparoscopic two steps: "mini gastro-gastroplasty" where surgeon created lateral-lateral "tube-remnant stomach" anastomosis and simple transect previous stapling line on gastro-jejunostomy with one stapler and leave bowel non-obstructive. If the obese patient changes his habits and starts to regain weight then a surgical option in MGB/OAGB could be an adding extension on a biliopancreatic limb up to 2.5 meters, or even more. In the laparoscopic procedure, a surgeon does a transection of the previous gastro/jejunostomy and creates a new anastomosis a half meter far from the previous anastomosis between gastric tube and jejunum [16].

In individuals with a history of depression, bariatric surgery is associated with an improvement in mental health. For those with pre-existing depression, by 5 years, just over 20% of post-surgical patients had no further depression episodes [19]. According to some recent studies, MGB/OAGB is superior in terms of weight loss to laparoscopic gastric sleeve resection, but it also gives very good results in the treatment of type-2 diabetes [20, 21].

In our case, there was a satisfactory response regarding %EWL, but also the cessation of psychiatric therapy and remission of depression. But in patients with severe depression, there is doubt whether is any operation sufficient and successful for treating obesity combined with the eating disorder. Some authors do not recommend any metabolic procedure [22]. That's why in this group of patients metabolic operation should be taken very carefully, regarding complex

postoperative period. Needs for maintenance of psychiatric therapy and lifestyle (sweet or bench eaters) especially taking alcohol and smoking must be respected [23]. In our patient, we choose MGB/OAGB as an operation with the possibility of complete restoration of the digestive tract, and with preoperative anamnestic data of cessation of alcohol.

In psychiatric obese patients, a metabolic procedure should be carefully selected. MGB/OAGB is the ideal bariatric/metabolic procedure in this group of patients: completely reversible and could be easily reverted or “tailored” to the profound malabsorptive component, depending on patient habits after the operation. MGB/OAGB is a powerful operation with low mortality and low morbidity and is especially indicated in the psychiatric group of obese patients.

In conclusion, MGB/OAGB proved to be a successful bariatric procedure in our patient, leading to remission of depression and discontinuation of psychiatric therapy, but also to a significant reduction in body weight, with a %EWL of 73.1% at one year after surgery.

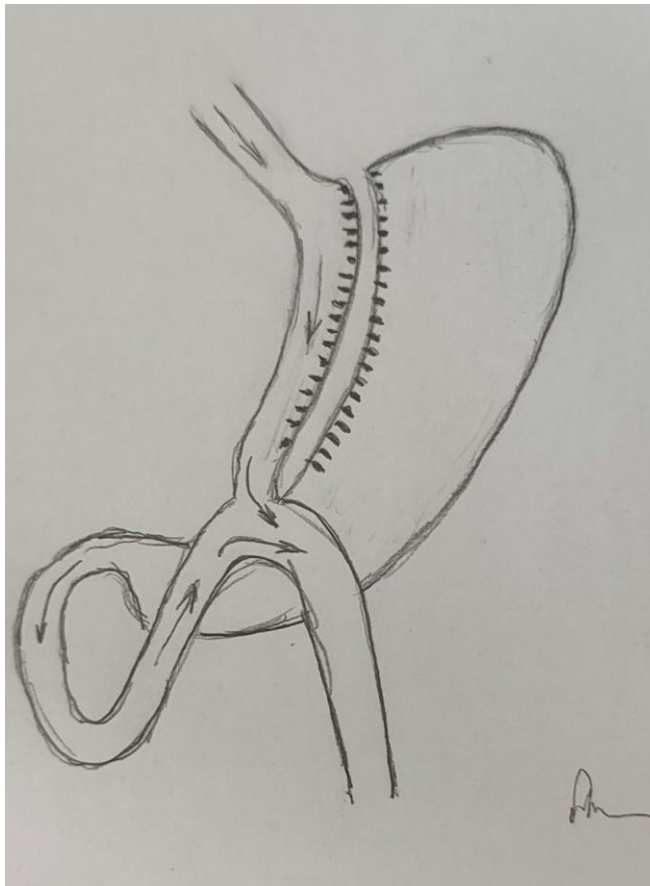
**Conflict of interest:** None declared.

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**Figure 1.** Mini/one anastomosis gastric bypass





**Table 1.** Results one year after procedure

Months	0	1	6	12
Weight (kg)	144	126	114	95
BMI (kg/m <sup>2</sup> )	46.8	41	37	30.9
%EWL	/	26.9	44.7	73.1

Percent excess weight loss (%EWL) =  $\frac{(\text{Initial Weight}) - (\text{Postoperative Weight})}{(\text{Initial Weight}) - (\text{Ideal Weight})} \times 100$

Paper accepted