

Role of Mini Gastric Bypass/OAGB in Thin Diabetic: A New Program in Serbia (Vojvodina)

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Surgeons and Diabetes Mellitus: A New Story?



Surgery and DMT2

Sushruta (ancient India) 600 B.C.



*Practiced and propagated
the Art of Surgery
at the University of Benares.*

*His monumental compendium
on surgery, **Sushruta Samhita**,
glorified him as the
Father of (Indian) Surgery.*

Sedentary Death Syndrome

*Obesity as a disease was attributed to a sedentary lifestyle which could lead to death.
Diabetes as a disease of the urinary tract (prameha) and as an incurable condition (madhumeha).*

Surgery and DMT2



John Rollo, 1798



*Scottish military surgeon in
the Royal Artillery,
Woolwich, England*

Notes of a Diabetic Case, 1797.

The term mellitus (Latin, “sweet like honey”) was coined by Rollo in 1798, to distinguish this diabetes from the other diabetes (insipidus) in which the urine was tasteless.



Surgery and DMT2

Sir Frederick Grant Banting KBE MC FRS FRSC



*Canadian surgeon and physician
University of Toronto*

Nobel prize, 1923.

*Since 2007, 14th November (his
Birthday) is World Diabetes Day.*

F. G. Banting.

Discovery of insulin / experimental surgery on dogs

Life-saving infusion of a bovine extract of insulin (made by biochemist Collip) to a 14-year-old boy in 1922. at the Toronto General Hospital, a milestone in the world of diabetic therapy.



Surgery and DMT2

A LONG ROAD

Observations that diabetes can be improved or even resolved by surgical operations have been reported for almost a century.

1920

1930

1940

1950

1955

Weight-loss (bariatric) surgery introduced.

1960

1970

1980

1990

2000

2004

Experimental evidence in rats links gastrointestinal surgery and glucose metabolism⁶.

2007

First Diabetes Surgery Summit.

2010

2015

Second Diabetes Surgery Summit.

2020

2016

Guidelines for the surgical treatment of diabetes published in *Diabetes Care*¹.

1925-50

Several reports document diabetes resolution after stomach surgery.



World's heaviest family in 1929.

1970-95

Several reports consistently document remission of diabetes after bariatric surgery.

2006-07

Studies in humans start to explore the use of surgery as an intentional treatment of diabetes¹⁰.

2008-15

Publication of several randomized clinical trials demonstrates effects of surgical treatment of diabetes.

Surgery and DMT2



Metabolic Surgery in the Treatment Algorithm for Type 2 Diabetes: A Joint Statement by International Diabetes Organizations

Diabetes Care 2016;39:861–877 | DOI: 10.2337/dc16-0236

Francesco Rubino,¹ David M. Nathan,²
Robert H. Eckel,³ Philip R. Schauer,⁴
K. George M.M. Alberti,⁵ Paul Z. Zimmet,⁶
Stefano Del Prato,⁷ Linong Ji,⁸
Shaukat M. Sadikot,⁹
William H. Herman,¹⁰
Stephanie A. Amiel,¹ Lee M. Kaplan,²
Gaspar Torancher-Oldenburg,¹¹
and David E. Cummings,¹²
on behalf of the Delegates of
the 2nd Diabetes Surgery Summit*

Metabolic surgery should be a *recommended* option to treat T2D in appropriate surgical candidates with class III obesity (BMI ≥ 40 kg/m²), regardless of the level of glycemic control or complexity of glucose-lowering regimens, as well as in patients with class II obesity (BMI 35.0–39.9 kg/m²) with inadequately controlled hyperglycemia despite lifestyle and optimal medical therapy.

Metabolic surgery should also be *considered* to be an option to treat T2D in patients with class I obesity (BMI 30.0–34.9 kg/m²) and inadequately controlled hyperglycemia despite optimal medical treatment by either oral or injectable medications (including insulin).



Surgery and Thin Diabetic

Surgery in DMT2 and BMI < 35 kg/m²



*Meta analysis: 13 trials, 357 pts. (follow up 6 m - 18 years)
80% pts. HgA1c < 7% without antidiabetic medication*

3,2 % major complication, no mortality

Bariatric surgery is effectual and safe in the treatment of non-severely obese (BMI < 35 kg/m²) DMT2 patients. Moreover, the metabolic benefits acquired from the procedures can be long sustained after the surgery.

Li Q, Chen L, Yang Z, Ye Z. at all. Metabolic effects of bariatric surgery in type 2 diabetic patients with body mass index < 35 kg/m². Diabetes Obes Metab. 2012 Mar;14(3):262-70.

Surgery in DMT2 and BMI < 35 kg/m²



2013. European Guideline (IFSO, IFSO-EC, EASO)

Patients with BMI ≥ 30 and < 35 kg/m² with T2DM may be considered for bariatric surgery on an individual basis, as there is evidence-based data supporting bariatric surgery benefits in regards to T2DM remission or improvement.

Thin Diabetic: to operate or not?



Normal weight pts. BMI = 18,5 - 24,99 kg/m² (15%)

Overweight pts. BMI = 25.0-29.9 kg/m²

Obese Class I pts. BMI = 30.0-34.9 kg/m²

Obesity paradox:

"This really is an argument to treat a normal-weight person with diabetes as aggressively as you would treat an overweight or obese person with diabetes."

"Adults who were normal weight at the time of incident diabetes had higher mortality than adults who are overweight or obese."

Carnethon M, de Chavez P, Biggs M, et al. Association of weight status with mortality in adults with incident diabetes. JAMA 2012; 308: 581-590.

Thin Diabetic: What Surgery?



Foregut exclusion

Optimum of weight loss

To be effective

To be durable

Easy to perform

Easy to control possible complications

To be reversible

To be tailored

+ *Patient's ability to eat fruits and "non-diabetic" food*

Thin Diabetic: What Surgery?



LGB ? *NO*

Sleeve ? *NO*

BPD-DS? *NO*

LRYGB? *Maybe*

But:

Long learning curve

SBO

Restrictive component significant

Serious short term and long term complications

Difficult redo surgery



Thin Diabetic: MGB?



MGB in DMT2

30 pts. DMT2
BMI \approx 50 kg/m²
Complete remission 86, 7% (6 m)

Habashi AB, Sakr M, Hamaza Y, Sweidan A, Tacchino R, Frieg A (2016). The Role of Mini Gastric Bypass in the Control of Type 2 Diabetes Mellitus. Biolife, 4(2), pp 255-260. doi:10.17812/blj.2016.427

224 pts. DMT2
BMI \approx 48 kg/m²
Complete remission 84,4% (5 years)

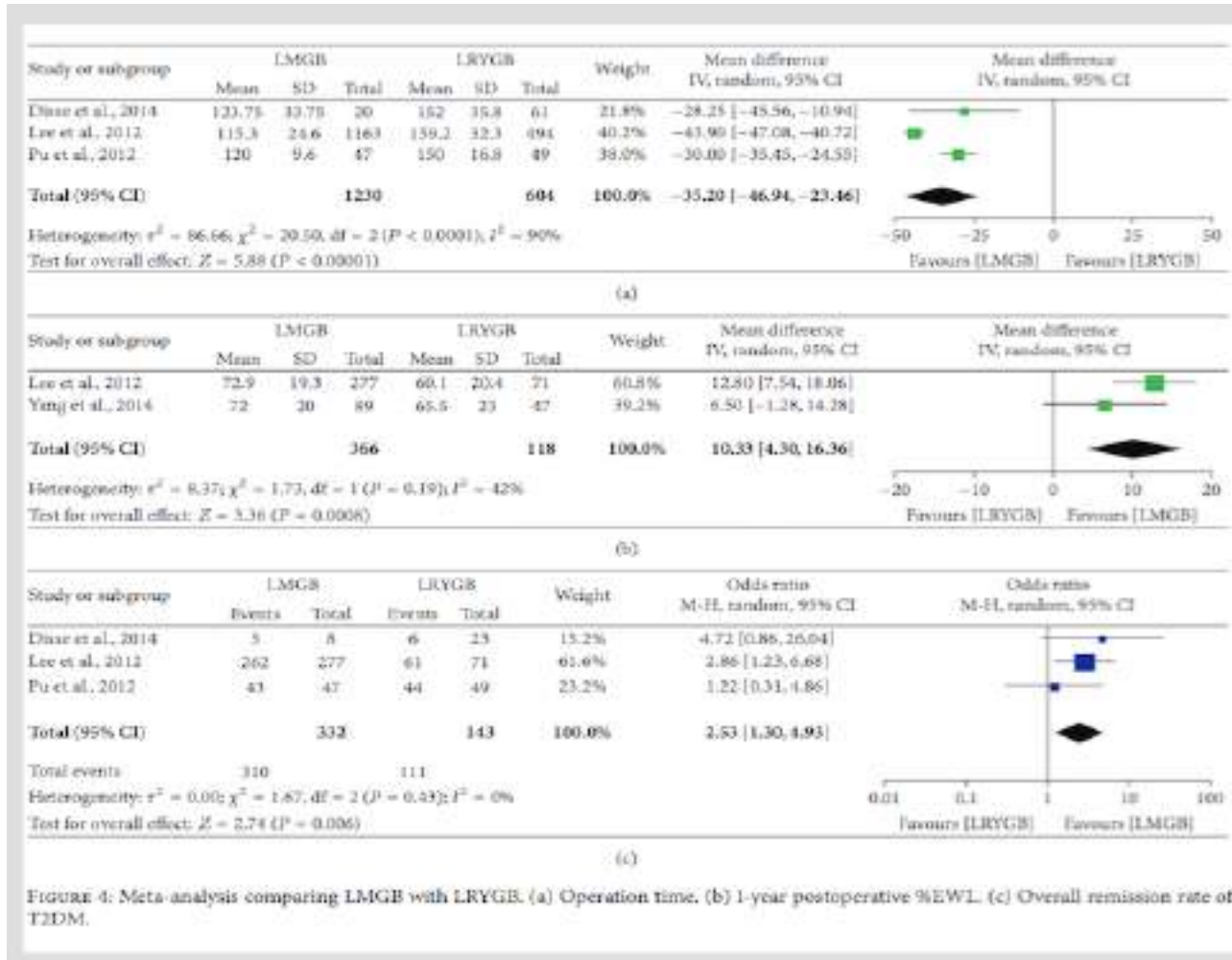
Musella M, Susa A, Greco F, De Luca M, Manno E, Di Stefano C, et al. The laparoscopic mini-gastric bypass: the Italian experience: outcomes from 974 consecutive cases in a multicenter review. Surgical endoscopy. 2014;28(1):156-63.

16 pts. DMT2
BMI \approx 46 kg/m²
Complete remission 87,5% (1 year)

Milone M, Di Minno M, Leongito M, Maietta P, Bianco P, Taffuri C, et al. Bariatric surgery and diabetes remission: sleeve gastrectomy or mini-gastric bypass. World J Gastroenterol. 2013;19(39):6590-7.



MGB in DMT2



In terms of therapeutic effects, LMGB seemed more effective in weight loss (%EWL, $P = 0.0008$) and remission of T2DM (93.4% versus 77.6%, $P = 0.006$) than LRYGB

Quan Y, Huang A, Ye M, Xu M, Zhuang B, Zhang P, et al. Efficacy of laparoscopic mini gastric bypass for obesity and type 2 diabetes mellitus: a systematic review and meta-analysis. *Gastroenterol Res Pract.* 2015;2015.

Thin Diabetic and MGB



Technique of MGB

“MGB is an effective, relatively low-risk, and low-failure bariatric procedure. In addition, it can be easily revised, converted, or reversed.”

*Noun, R., Skaff, J., Riachi, E. et al. One Thousand Consecutive Mini-Gastric Bypass: Short and Long-term Outcome. OBES SURG (2012) 22: 697.
doi:10.1007/s11695-012-0618-z*



Thin Diabetic and MGB

303 pts. (6.385)

BMI = 21 - 35 kg/m²

Resolution or improvement 95% (6 m - 4 y.)

“The MGB operations were tailored for lower weight patients: shorter bypass length and larger gastric pouch... Weight loss can be customized.”

Rutledge R. Resolution of Diabetes Mellitus in Lower Weight Patients With Mini-Gastric Bypass. Apc a-00101.

Rutledge R. The mini-gastric bypass: Experience with the first 1,274 cases. Obes Surg 2001;11:276-80

Thin Diabetic and MGB



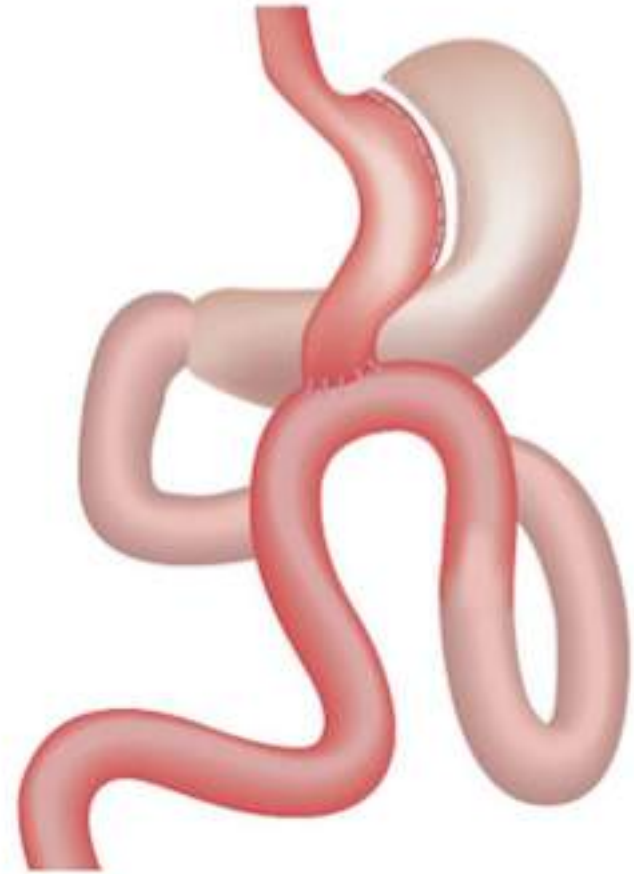
10 pts.

BMI < 30 kg/m²

Resolution 70 % (6 m)

Asian population

200 cm from Treitz ligament



Kim Z, Hur KY: Laparoscopic mini-gastric bypass for type 2 diabetes: The preliminary report. *World J Surg* 2011;35:631-636.



Thin Diabetic and MGB

13 pts.

BMI < 30 kg/m²

Resolution 77 % (6 m)

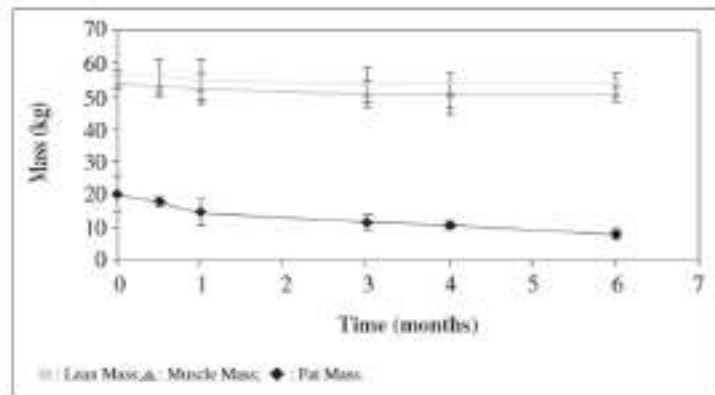


Fig. 5.—Changes in fat mass, lean mass and muscle mass in patients undergoing.

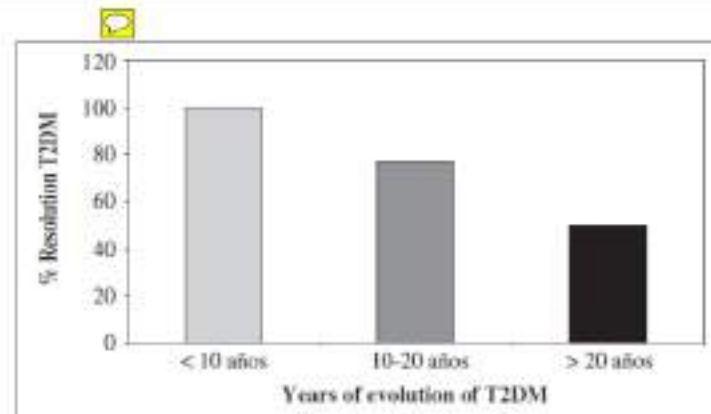


Fig. 6.—Percentage of resolution of the T2DM patients after BAGUA according to the years of evolution of the disease.

“We have found not significant changes between the resolution of the DM2 and the percentage of weight lost. A 97.7% of diabetics reaches its ideal weight regardless of the resolution of the DM2. This absence of differences suggests that the weight in these patients does not play an essential role in the resolution of the disease...”

Garcia-Caballero M, Valle M, Martinez-Moreno JM et al.: Resolution of diabetes mellitus and metabolic syndrome in normal weight 24-29 BMI patients with one anastomosis gastric bypass. *Nutr Hosp* 2012;27:623-631.

Thin Diabetic and MGB



44 pts.

BMI < 35 kg/m²

Resolution 89,5 % (1 year)

100 cm from Treitz lig.

“Patients with BMI <35 still had an acceptable DM resolution, and this treatment option can be offered to this group of patients.”

Lee WJ, Wang W, Lee YC, Huang MT, Ser KH, Chen JC. *Effect of laparoscopic mini-gastric bypass for type 2 diabetes mellitus: Comparison of BMI >35 and <35 kg/m². J Gastrointest Surg* 2008;12:945-52.

30 pts.

BMI < 35 kg/m²

Resolution 60 % (5 years)

120 cm from Treitz lig.

“SAGB was more likely to achieve better glycemic control than SG and had a higher incretin effect compared to SG.”

Lee WJ, Chong K, Lin YH, Wei JH, Chen SC. *Laparoscopic sleeve gastrectomy versus single anastomosis (mini-) gastric bypass for the treatment of type 2 diabetes mellitus: 5-year results of a randomized trial and study of incretin effect. Obes Surg.* 2014 Sep;24(9)1552-62.



Thin Diabetic and MGB

128 pts.

BMI = 30 - 35 kg/m²

Complete remission 53% (7 years)

“MGB provides good, long-term control of T2DM in patients with class I obesity. Early intervention results in higher remission rates.”

Kular KS, Manchanda N, Cheema GK. Seven Years of Mini-Gastric Bypass in Type II Diabetes Patients with a Body Mass Index <35 kg/m². Obes Surg. 2016, Vol 26: 7, 1457-1462



MGB in Thin Diabetic

Efficient, durable and sustainable operation

Excellent results in all lower weight groups of pts.

Complete remission or improvement in almost every patient

Powerful operation with only one variable - bypass limb

Almost every thin diabetic reaches its ideal weight

Can be tailored and individualized (patient and surgeon preference)

Completely reversible

More effective in remission of DMT2 than LRYBP

Low risk

Should be done early after onset of DMT2



DMT2 in Serbia

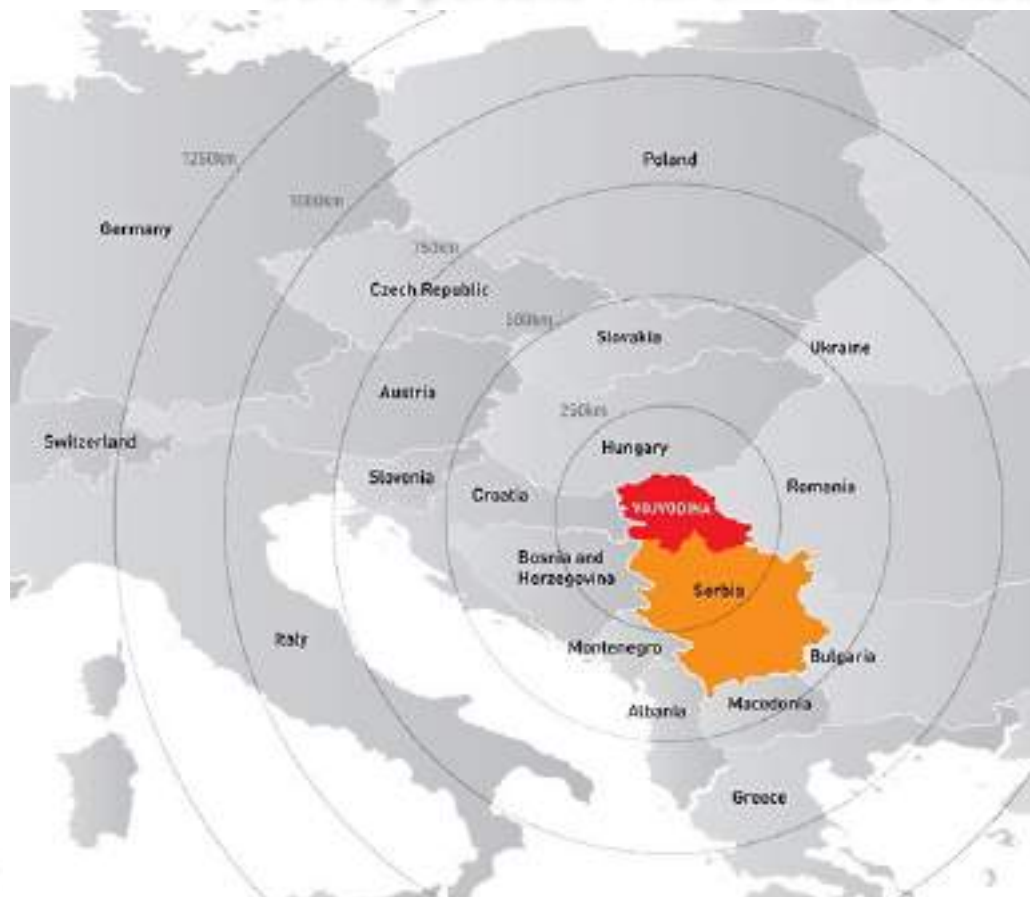
Autonomous province of Vojvodina

Institute of Public Health of Serbia (2014)

Serbian Diabetes Registry



*710.000 pts. DMT2 (12,4% of adult population)
36% of persons with DMT2 have not been diagnosed*

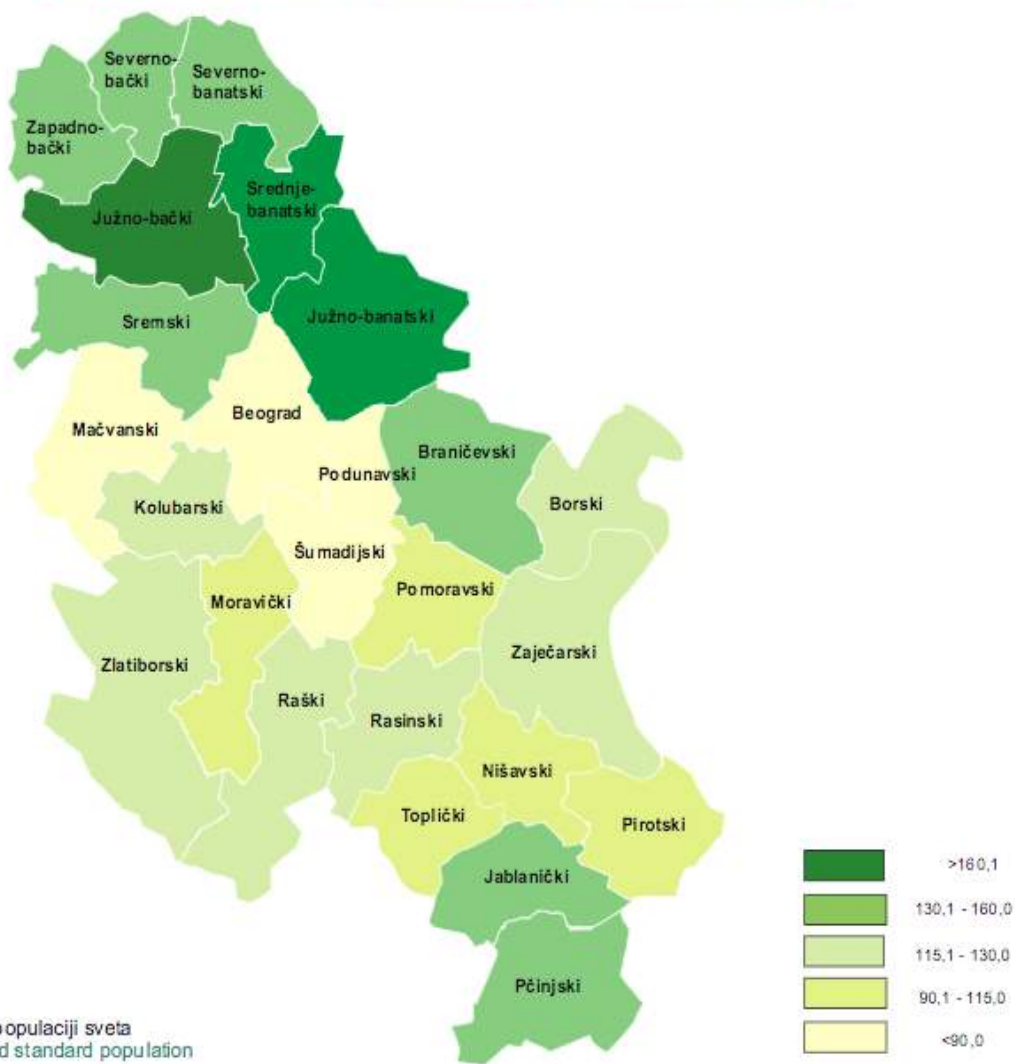


*2500 persons die
Mortality rate 12,6 / 100.000 (EU highest rate)*



Incidence of DMT2 - Autonomous Province of Vojvodina (~ 2.000.000)

Slika 11. Standardizovane stope incidencije* od tipa 2 dijabetesa na 100.000 stanovnika, Srbija, 2014. godina
Figure 11 . Age-standardized incidence rates* of type 2 diabetes per 100.000 population, Serbia, 2014



MGB: A New Program in Serbia



*Community Health
Centre*



Produkcija laboratorije (zahtev za ispitivanje)
Analiza laboratorije (zahtev za ispitivanje)
Laboratorija "Zvezda Anestezija Zvezda"
Laboratorija "Liman"
Laboratorija "Nova Hestija"
Laboratorija - mikrobiološki
Laboratorija Begej
Laboratorija Bekeševa
Laboratorija Bukovca
Laboratorija Bukovca
Laboratorija Bukovca varietandarne usluge
Laboratorija Beetrovov vodina
Laboratorija Futog
Laboratorija B.C. Futog
Laboratorija B.C. Liman
Laboratorija B.C. Nova Hestija
Laboratorija J. J. Zvezda deca, trudnice
Laboratorija J. J. Zvezda hron. prijem
Laboratorija J. J. Zvezda odrasli
Laboratorija J. J. Zvezda kućne posude
Laboratorija J. J. Zvezda odrasli p.
Laboratorija J. J. Zvezda specijalni pregledi
Laboratorija Rad
Laboratorija Ruzič
Laboratorija Ruzič
Laboratorija Ruzič
Laboratorija Liman deca, trudnice
Laboratorija Liman hron. prijem
Laboratorija Liman kućna priprema

MGB: A New Program in Serbia



*Central Laboratory of Community Health Centre
28 affiliated Lab*

jul, 2015.god

Najava novog reagensa za HbA1c (HbA1c) za AU sisteme
Kataloški broj B00389

Poštovani,

Beckman Coulter Inc. sa zadovoljstvom želi da najavi novi reagens za hemoglobin A1c (kat. br. B00389) namenjen za upotrebu na AU biohemijskim analizatorima.

Nov reagens je razvijen i dizajniran tako da smanji interferencije koje potiču od uobičajenih varijanti hemoglobina sa ciljem da se poboljša tačnost i preciznost testa kako bi se ispunile najnovije NGSP/IFCC smernice.

Test je zasnovan na metodi turbidimetrijske imunoinhibicije namenjen za određivanje hemoglobin A1c u punoj krvi. Reagens pakovanje se sastoji od dvokomponentnog reagensa za HbA1c (HbA1c R1 i HbA1c R2), reagensa za Total hemoglobin (R1), i 5 nivoa kalibratora za HbA1c. Hemolizujući reagens (Hemolyzing Reagent, kat.br. 472137) se posebno nabavlja.

Nov HbA1c reagens je namenjen za upotrebu sa punom krvi koja je sakupljena u EDTA, litijum heparin ili natrijum heparin epruvetama.

Karakteristike novog HbA1c testa:

- Dvokomponentni reagens za HbA1c, spreman za upotrebu
- Jednokomponentni reagens za Total hemoglobin, spreman za upotrebu
- Set od 5 nivoa kalibratora koji se nalaze u pakovanju sa reagensom
- Kalibracija Total hemoglobina u dve tačke upotrebom fiziološkog rastvora i kalibratora (koji se nalazi u pakovanju)
- Oprema kalibratori za HbA1c 20-140 mmol/mol HbA1c (IFCC) i 4-15% HbA1c (NGSP)

HgA1c



AACE/ACE 2015 Guidelines

Criteria for Diagnosing Prediabetes

Impaired fasting glucose (IFG)
FPG ≥ 100 -125 mg/dL

or

Impaired glucose tolerance
2-hr PG ≥ 140 -199 mg/dL

or

A1C 5.5-6.4%

- A1C test is a screening tool only
- Use FPG or OGTT for definitive diagnosis

FPG=fasting plasma glucose, OGTT=oral glucose tolerance test, PG=plasma glucose

Handberg et al. Endocrine Practice 2015;21(suppl 1):1-67.



AACE/ACE 2015 Guidelines

Criteria for Diagnosing Type 2 Diabetes

FPG ≥ 126 mg/dL

After ≥ 8 hrs fasting

or

2-hr PG ≥ 200 mg/dL

2 hrs after ingesting a 75-g oral glucose load in the morning after ≥ 8 -hr overnight fast

or

Random PG ≥ 200 mg/dL + hyperglycemia symptoms

Polyuria, polydipsia, polyphagia

or

A1C $\geq 6.5\%$

- Same test should be repeated on different day to confirm diagnosis
- No confirmation required for glucose level ≥ 200 mg/dL in the presence of symptoms

FPG=fasting plasma glucose, PG=plasma glucose

Handberg et al. Endocrine Practice 2015;21(suppl 1):1-67.

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Glavna strana > DZ Novi Sad > Svišta za laboratorijsku diagnostiku > Laboratorija "Liman" > Laboratorija Liman kućne posete

JOVAN OMLJAN SMEDEREVAČ [M] | 11.9.1941. (74 godine)

Pacijent Valsininski karton Opšte stanje Anamneza Faktori rizika Stac. lečenja

Rezultati laboratorijske analize

27.1.2016. 12:59

Sistem	Analiza	Vrednost	Referentna vrednosti	Jednica mere	27.1.2016.	9.6.2016.	29.6.2016.	7.7.2016.
	Sedimentacija eritrocita	10	[0-15]	mm/h	10	7	/	/
	MPV	9.3	[6.5-11.0]	fL	9.3	8.8	/	/
	Limfociti	36.1	[20.0-40.0]	%	36.1	36.5	/	/
	Hematokrit	0.42	[0.35-0.54]	L/L	0.42	0.42	/	/
	Hemoglobin	144	[120-180]	g/L	144	142	/	/
	Eritrociti	4.87	[3.8-6.0]	10 ¹² /L	4.87	4.94	/	/
	PCT	0.18	[0.1-0.5]	10 ⁻² %	0.18	0.18	/	/
	Bazofilni granulociti	0.7	[0.0-2.0]	%	0.7	0.3	/	/
	MCV	87	[80-97]	fL	87	87	/	/
	Eozinofilni granulociti	5.3	[0.0-4.0]	%	5.3	5.1	/	/
	MCH	29.7	[26.5-33.5]	pg	29.7	29.4	/	/
	MCHC	343	[315-360]	g/L	343	339	/	/
	Trombociti	192	[120-450]	10 ⁹ /L	192	209	/	/

Neutrofili granulociti	50.0	[50.0-70.0]	%	50.0	51.1	/	/
RDW	16.3	[10.0-18.0]	%	16.3	15.3	/	/
Leukociti	6.4	[4.0-10.0]	10 ⁹ /L	6.4	6.2	/	/
Monociti	7.9	[0.5-10.0]	%	7.9	7.0	/	/
RDW	12.9	[10.0-15.0]	%	12.9	13.4	/	/
Izgled	Bistar			Bistar	/	/	/
Boja	Zut			Zut	/	/	/
Relativna gustina	1.015	[1.004-1.04]	1	1.015	/	/	/
Reakcija pH	6.0	[4.4-8.0]	1	6.0	/	/	/
Proteini	0	[0-0]	arb. jed.	0	/	/	/
Glukoza	0	[0-0]	arb. jed.	0	/	/	/
Melkiozoni	0	[0-0]	arb. jed.	0	/	/	/
Urobilogen	1.0	[0-1]	EJ	1.0	/	/	/
Bilirubin	0	[0-0]	arb. jed.	0	/	/	/
Hemoglobin	0	[0-0]	arb. jed.	0	/	/	/
Nitrit	0	[0-0]	arb. jed.	0	/	/	/
Leukociti	2	[0-5]	vidno polje	2	/	/	/
Epitimske ćelije	Malo			Malo	/	/	/
Hemoglobin A1C	52	[20-44]	mmol/mol	52	49	/	/
Natrijum	138	[135-146]	mmol/L	138	141	/	/
Mokraćna kiselina	333	[155-430]	umol/L	333	380	/	/
ALT_cit	0.34	[0.0-0.50]	µkat/L	0.34	0.24	/	/
Holesterol	7.41	[0.0-5.1]	mmol/L	7.41	6.5	/	/
Urea	7.4	[2.8-7.2]	mmol/L	7.4	7.5	/	/
Kreatinin	79	[45-104]	umol/L	79	81	/	/
Trigliceridi	1.7	[0.0-1.7]	mmol/L	1.7	1.49	/	/
Bilirubin-ukupan	18.7	[0.0-21.0]	umol/L	18.7	17.0	/	/
AST_cit	0.34	[0.0-0.4]	µkat/L	0.34	0.17	/	/
Kalcijum	4.4	[3.5-5.1]	mmol/L	4.4	5.1	/	/

MGB: A New Program in Serbia



Hemoglobin	0	[0-0]	arb. jed.	0	/
Nitriti	0	[0-0]	arb.jed.	0	/
Leukociti	2	[0-5]	vidno polje	2	/
Epitelne ćelije	Malo			Malo	/
Alfa-amilaza (U)_old	1.14	[0.0-5.46]	μkat/L	/	1.14
Hemoglobin A1C	41	[20-44]	mmol/mol	52	49
Hemoglobin A1C	48	[20-44]	mmol/mol	52	49
Hemoglobin A1C	36	[20-44]	mmol/mol	52	49
Hemoglobin A1C	52	[20-44]	mmol/mol	52	49
Hemoglobin A1C	49	[20-44]	mmol/mol	52	49
AST_old	0.17	[0.0-0.4]	μkat/L	0.24	0.17
Trigliceridi	1.88	[0.0-1.7]	mmol/L	1.7	1.49
Kreatinin	97	[45-104]	μmol/L	79	81
Holesterol	5.44	[0.0-5.1]	mmol/L	7.41	6.5
ALT_old	0.21	[0.0-0.58]	μkat/L	0.34	0.24
Glukoza	7.0	[3.4-6.1]	mmol/L	8.1	7.1
Bilirubin-ukupan	23.3	[5.0-21.0]	μmol/L	18.7	17.9
ALT_old	0.23	[0.0-0.58]	μkat/L	0.34	0.24
Kreatinin	97	[45-104]	μmol/L	79	81

HgA1c



Community Health Centre, Novi Sad: 1.1.2016. - 30.6.2016.

978 pts.

> 44 mmol/mol

April: 193 pts.

May: 215 pts.

Jun: 219 pts.

140 pts. (72,5%)

154 pts. (71,6%)

140 pts. (64%)

Treatment of DMT2 is inadequate in 2/3 of patients



Metabolic Surgery 9 years in Serbia

2008 - 2018: 450 patients

Who referred the patients?

Endocrinologists 10
(2,2%)

General Surgeons 9
(2%)

Previous patients 200
(44%)

Other (media)
50%



How we offer a surgery?



MGB in Serbia



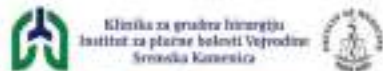
Prof. dr Miroslav Ilić
+381 63 501 301
drmirostavilic@gmail.com

MGB Done Right!

Johnson & Johnson



Stiga



Klinika za grudnu hirurgiju
Institut za plućne bolesti Vojvodine
Srpska Kamenica

HIRURŠKA SEKCIJA
KLINIKI ZA GRUDNU HIRURGIJU

Hirurgija gojaznosti
i metaboličkog
sindroma | Obesity
and Metabolic
Surgery

Dr Robert Rutledge

Center of Laparoscopic Obesity Surgery
Henderson, NV - USA



THE MINI GASTRIC-BYPASS (MGB)
HISTORY, OUTCOMES AND PERSPECTIVES

Petak / Friday
27.05.2016.



Dr Robert Rutledge
Inventor of the Mini-Gastric Bypass (1997)

27. May 2016.
Clinic for Thoracic Surgery
Institute for Lung Diseases
Sr. Kamenica, Put Dr Goldmana 4
Serbia

Programme

- 8:00 - 9:00 Registration
- 9:00 - 12:00 Live Surger from the O.R.
- 12:00 - 13:00 Lecture - Dr Rutledge
- 13:00 - 14:00 Lunch
- 16:00 - 18:00 Cases discussion, technical issues, questions and answers
- 20:00 Dinner Wine Restaurant Kovačević

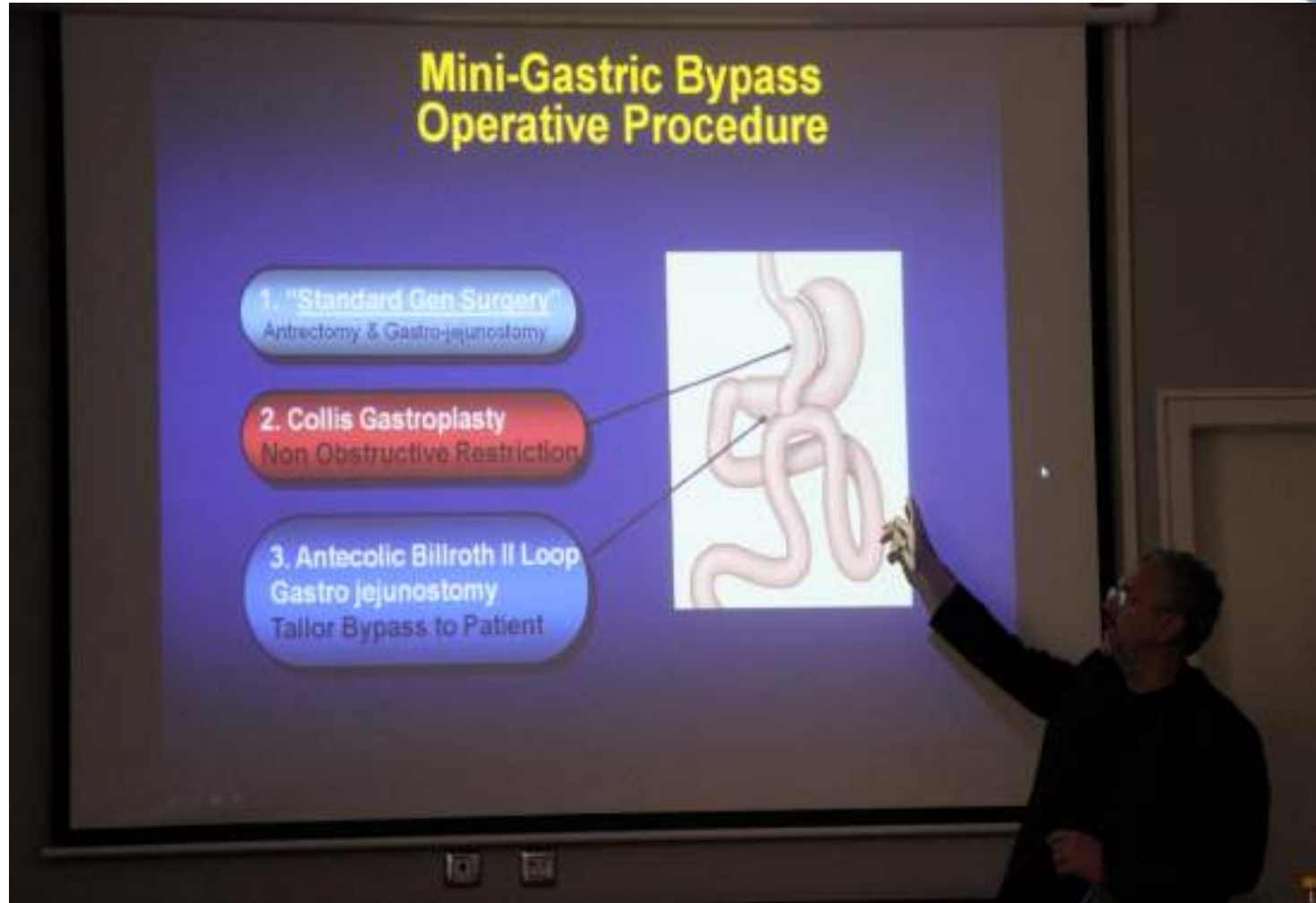
DrR@clos.net



Rutledge R. The mini-gastric bypass: Experience with 7000 procedures.

Institute for Lung Disease, Sr. Kamenica, 2016.

MGB in Serbia



Rutledge R. The mini-gastric bypass: Experience with 7000 procedures. Institute for Lung Disease, Sr. Kamenica, 2016.

MGB in Serbia



*Rutledge R. The mini-gastric bypass: Experience with 7000 procedures.
Institute for Lung Disease, Sr. Kamenica, 2016.*

MGB in Serbia



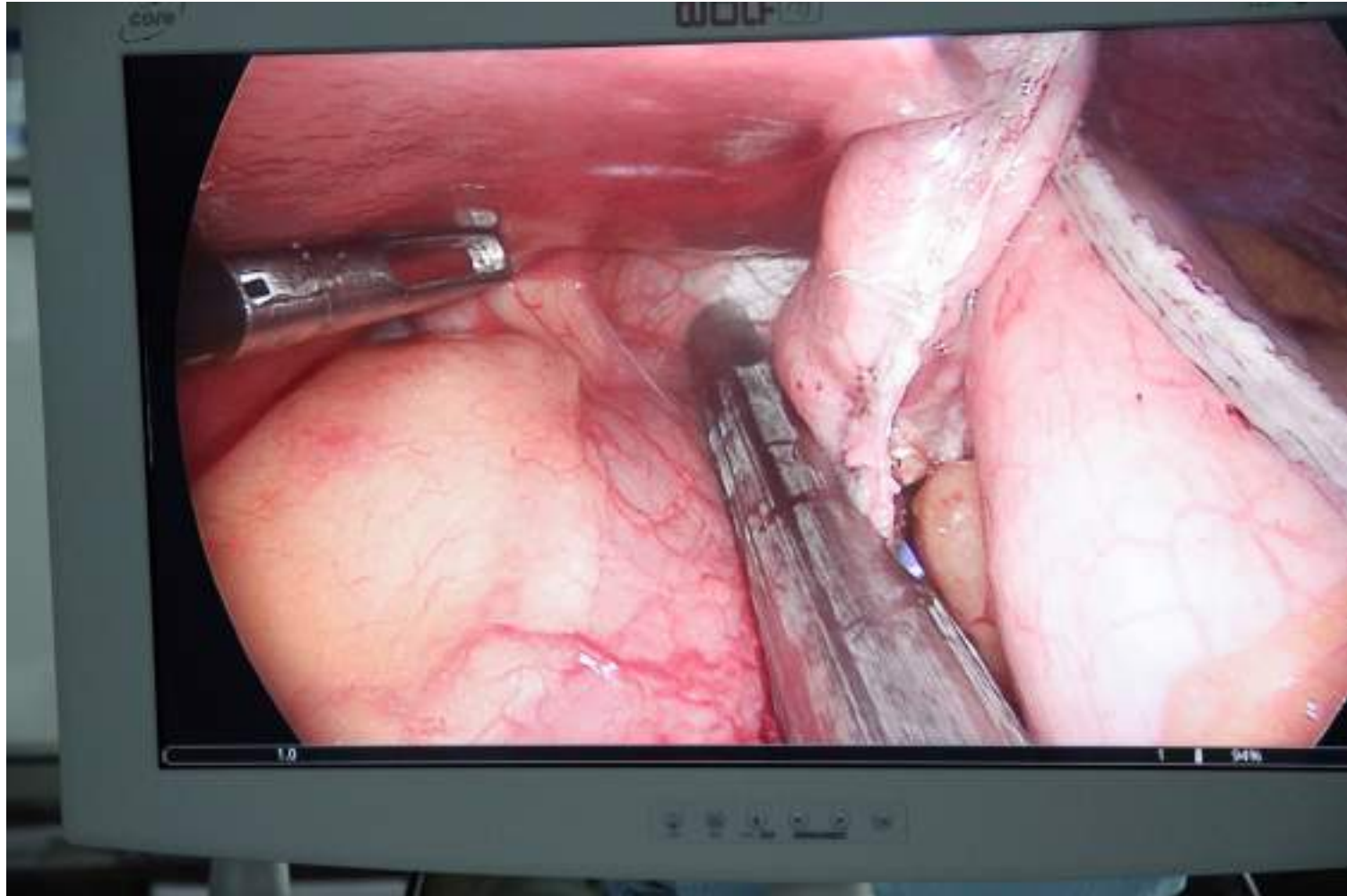
*Rutledge R. The mini-gastric bypass: Experience with 7000 procedures.
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MGB in Serbia



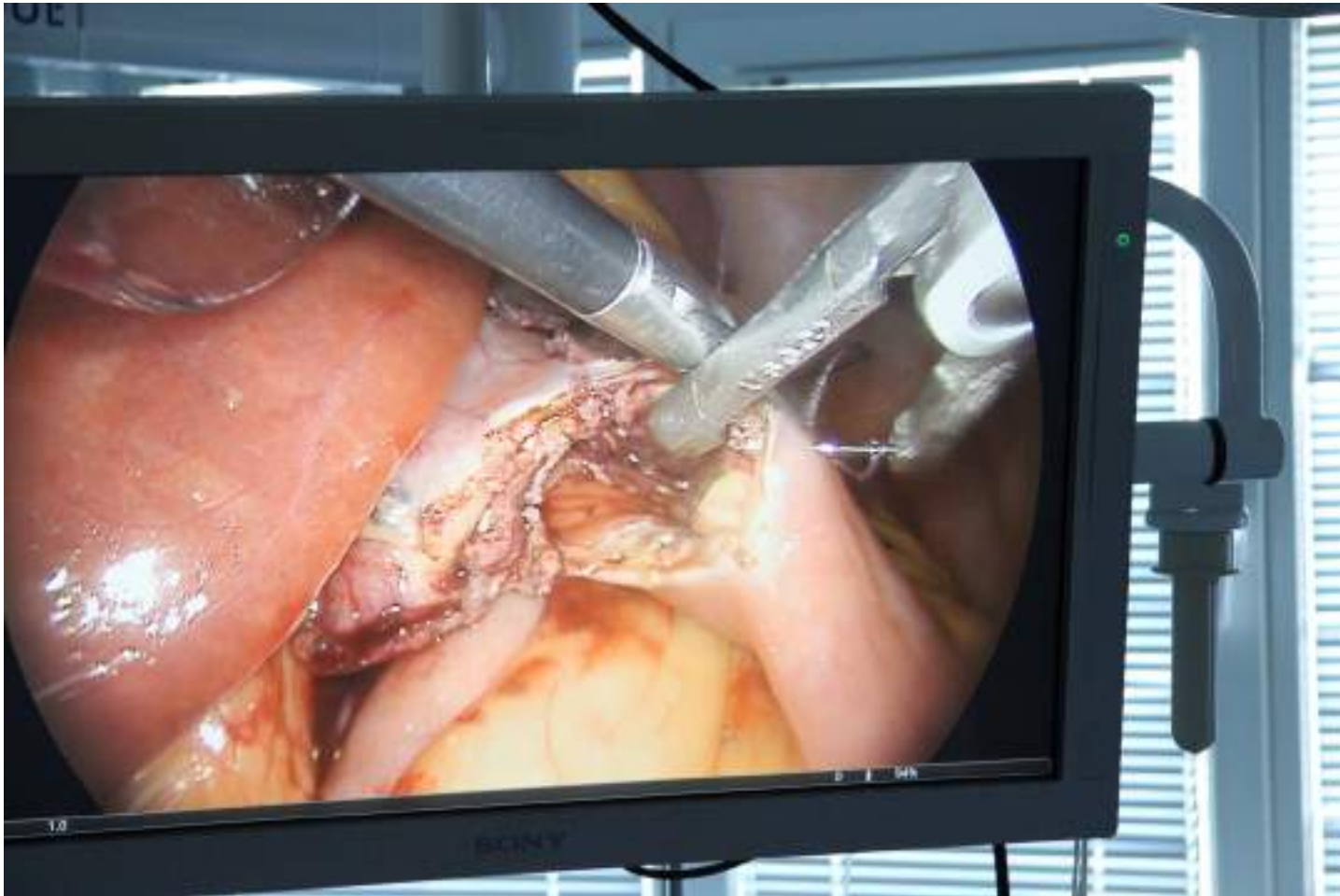
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MGB: A New Program in Serbia



May 2016 / May 2018

8 insulin dependent DMT2 pts.

MGB:

No complications

No therapy after 7 days

Follow up: 3m - 2 years

No insulin therapy (1 pts on oral drugs)



Conclusions

1. *Surgeons were involved in treating DMT2 from ancient time till today.*
2. *From 2015/16 modern guidelines recognize a important role of surgery in treatment of DMT2.*
3. *Obesity paradox warning medical community to think about surgical treatment of thin diabetics.*
4. *Analysis of surgical literature indicate MGB/OAGB as a procedure with greatest succes in thin diabetics.*
5. *AP Vojvodina is european region with highest rate of incidence and mortality DMT2.*
6. *2/3 pts have inadequate conservative treatment of DMT2 in Novi Sad, capital of AP Vojvodina.*
7. *As a Bariatric and Metabolic surgical centre, we offer MGB/OAGB to patints. No response from endocrinologists.*
8. *With Dr Robert Rutledge, inventor of MGB/OAGB we started in 2016 and done 8 pts.*
9. *Results are favourable with stopped insulin therapy on 7 th day in all patients.*