

Healthcare expenditures in people with type 2 diabetes undergoing bariatric-metabolic surgery

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COI Statement

- No conflicts of interest need to be disclosed

Bariatric-metabolic surgery and T2DM

Effective treatment in terms of medical outcomes

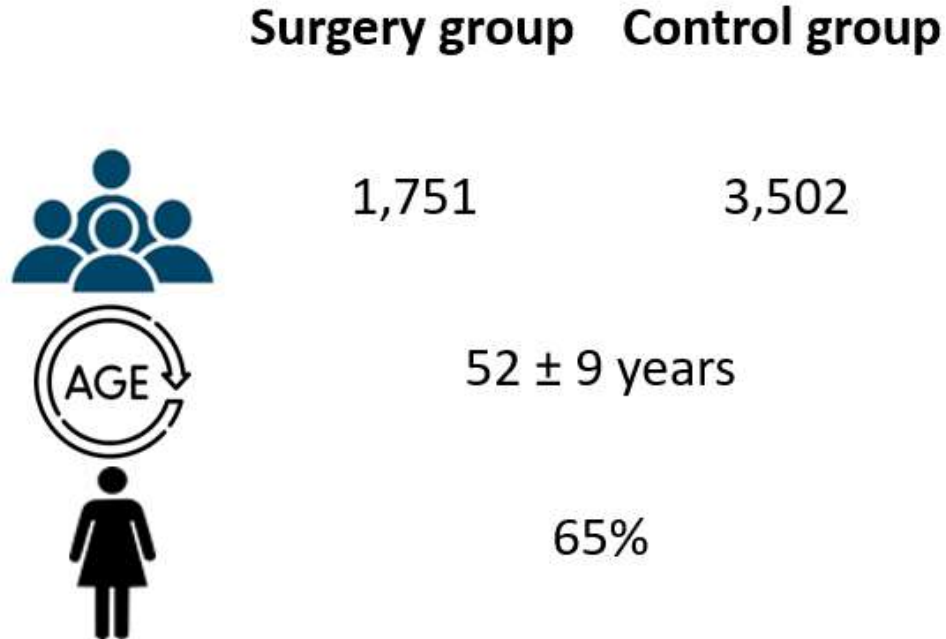
- Lower glycated haemoglobin (HbA1c)
- Lower fasting plasma glucose levels
- Reduction in cardiovascular disease (CVD) events
- Improved glomerular filtration rate and reduced albuminuria
- Improved vibration sensation

Bariatric-metabolic surgery and T2DM

Cost-effectiveness

- Cost savings are possible
- Evidence on associated changes in healthcare expenditures and utilisation is missing

Retrospective matched cohort study



Results – Total healthcare utilisation and expenditures

Table 1:

Overview of the percentage of patients using healthcare (utilisation), median expenditures per person for the people using healthcare and total expenditures of all healthcare per year for the surgery group and control group.

Year	Surgery group (N=1,751)			Control group (N=3,502)		
	Utilisation	Median expenditures	Total expenditures	Utilisation	Median expenditures	Total expenditures
2013	99.7	€ 3,156	€ 9,529,918	99.5	€ 3,174	€ 22,330,291
2014	99.8	€ 3,592	€ 10,760,613	99.9	€ 3,311	€ 22,885,705
2015	100	€ 4,526	€ 12,649,843	99.9	€ 2,784	€ 20,727,222
2016	100	€ 13,070	€ 26,359,278	100	€ 3,033	€ 22,862,161
2017	99.9	€ 3,616	€ 11,895,381	99.6	€ 2,990	€ 23,535,408
2018	99.8	€ 3,119	€ 11,019,142	99.4	€ 3,219	€ 24,148,916
2019	99.2	€ 3,120	€ 11,234,337	99.1	€ 3,434	€ 24,846,936

Results – Pharmaceutical care

Table 3:
Percentage of patients using pharmaceutical care (utilisation), median expenditures of all medication, and diabetes medication per year per patient for the surgery group and control group.

Year	Surgery group (1,751)						Control group (n=3,502)					
	Utilisation	Expenditures					Utilisation	Expenditures				
		Total	Oral	Insulin	Oral/insulin	Other		Total	Oral	Insulin	Oral/insulin	Other
2013	98.2	€ 686	€ 22	€ 822	€ 886	€ 0	97.2	€ 605	€ 17	€ 590	€ 648	€ 0
2014	99.0	€ 800	€ 23	€ 695	€ 961	€ 0	98.5	€ 649	€ 18	€ 468	€ 654	€ 0
2015	99.7	€ 957	€ 26	€ 947	€ 986	€ 0	98.7	€ 678	€ 19	€ 596	€ 630	€ 0
2016	100	€ 861	€ 50	€ 474	€ 650	€ 0	98.7	€ 723	€ 68	€ 526	€ 772	€ 0
2017	98.8	€ 442	€ 37	€ 354	€ 415	€ 0	98.1	€ 770	€ 70	€ 640	€ 769	€ 1,654
2018	98.2	€ 419	€ 48	€ 358	€ 470	€ 0	97.6	€ 798	€ 85	€ 662	€ 778	€ 1,813
2019	97.2	€ 494	€ 56	€ 449	€ 539	€ 0	97.3	€ 936	€ 95	€ 650	€ 807	€ 1,785

Total: all medication; Oral: oral blood glucose lowering medication (A10B); Insulin: insulin (A10A); Oral/insulin: a combination of oral blood glucose lowering medication; Other: combination medication (A10AE54 or A10AE56).

Results – Pharmaceutical care

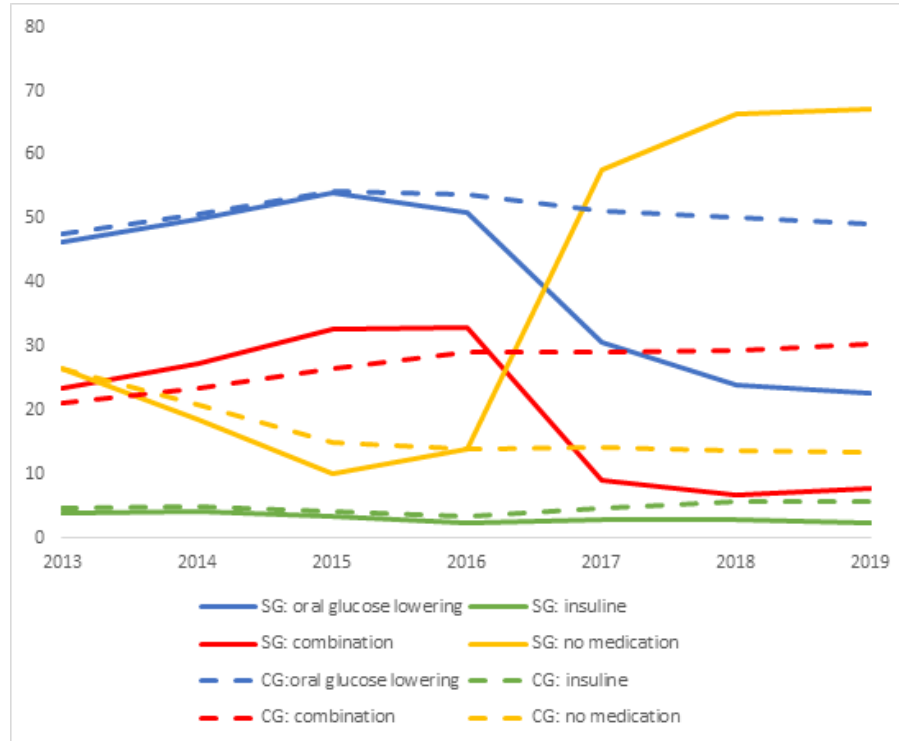
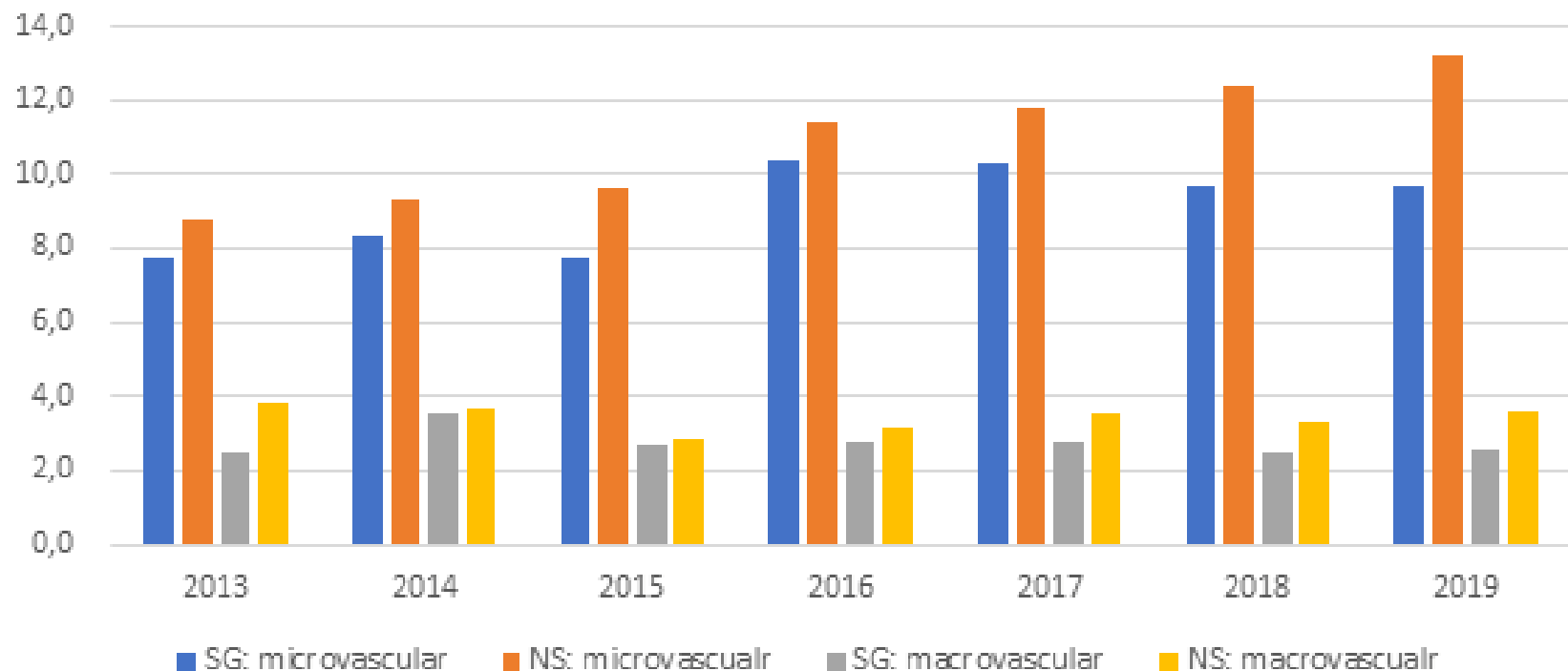


Figure 2: Percentage of people with utilizing healthcare for micro- and macrovascular complications in the surgery and control group.



Conclusion

Follow-up 3 years

- Total healthcare expenditures stabilized in surgery group, while in the matched control group the expenditures rose
- Medication use for T2DM decreased in patients who underwent surgery
- Percentage of people utilizing healthcare for microvascular complications of T2DM continued to increase in the control group

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Questions?

