

Could A1C be leakage predictor in Sleeve Gastrectomy?

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CONFLICT OF INTEREST DISCLOSURE

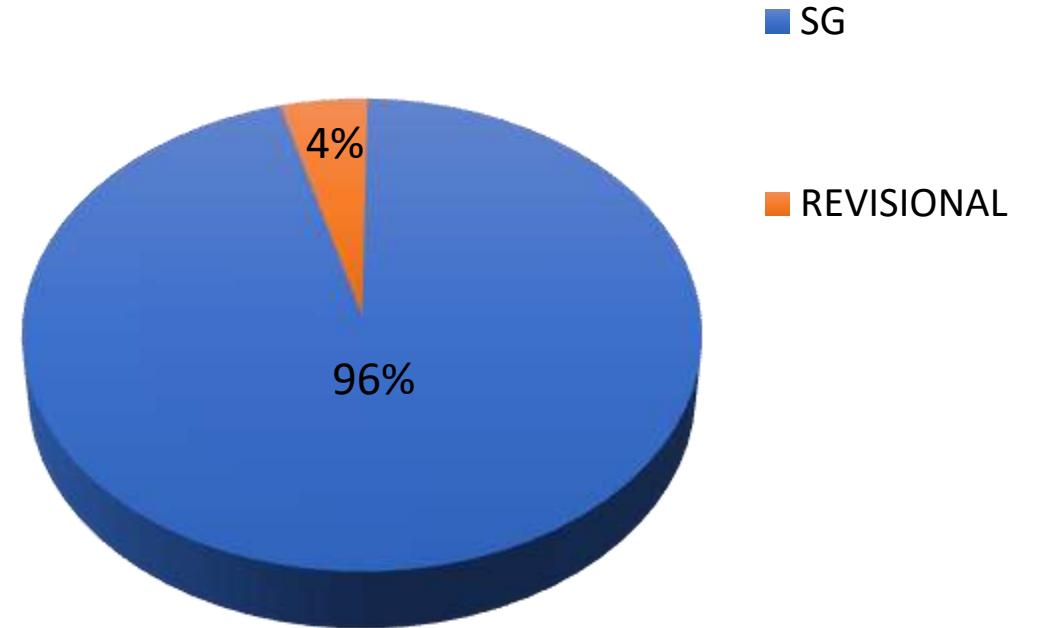
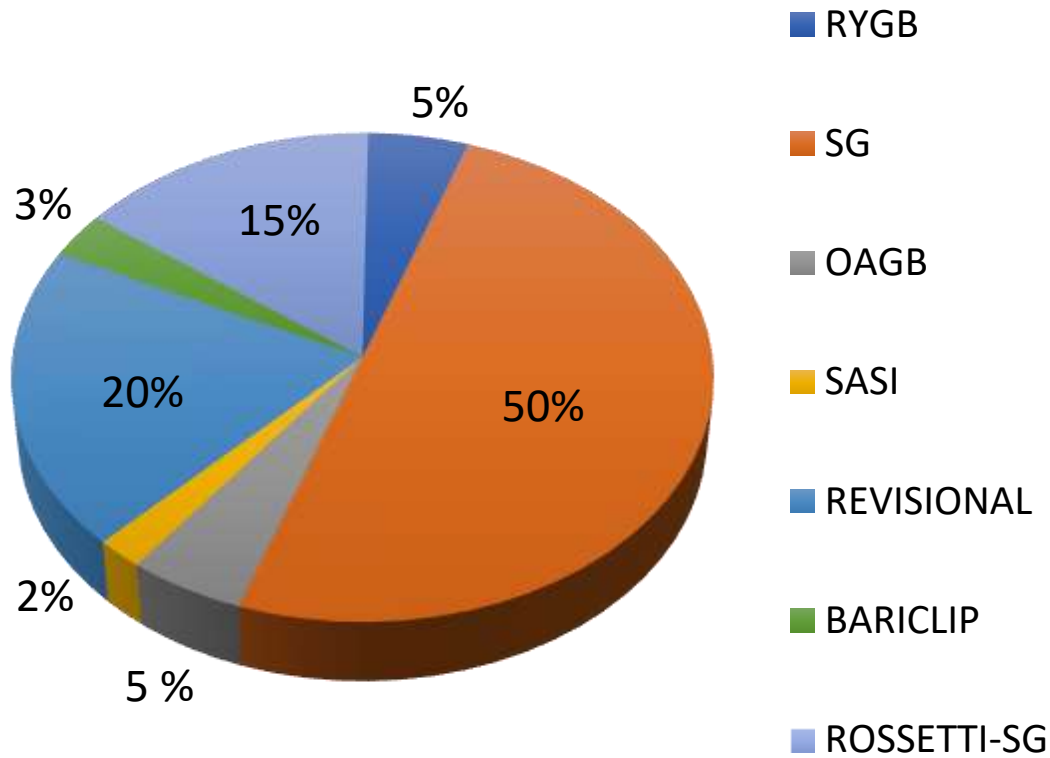
I HAVE NO POTENTIAL CONFLICT OF INTEREST TO REPORT



CASE MIX DISCLOSURE

High volume Center: 1400 operations/year
Equipe: 10 surgeons

Personal case mix disclosure





INTRODUCTION

1

- Diabetes mellitus (DM) is one of the most frequent chronic diseases in the world¹

2

- Obesity is the most important risk factor for metabolic syndrome, insulin resistance and T2D² → great economic impact

3

- Many studies have shown that bariatric surgery significantly improves glycemic control^{3,4}

1. Whiting DR et al. Diabetes Res Clin Pract. 2011

2. Poulsen P et al. Diabetologia. 1999

3. Nguyen NT et al. Obes Surg. 2011

4. Sjöström L et al. JAMA. 2014





INTRODUCTION (2)

4

- A Joint Statement by International Diabetes Organizations in 2017 recommended considering surgery for obese patients with T2DM¹

5

- Major susceptibility to infections, anastomotic leakage, and cardiac complications has been observed in patients with DM after surgery²

6

- Some authors tried to predict surgery-related risk in diabetic patients using glycated hemoglobin (A1C) value³

1. Brethauer SA et al. Ann Surg. 2013
2. Schauer PR et al. N Engl J Med. 2017
3. Mingrone G et al. Lancet. 2015





METHODS

STUDY DESIGN

- Retrospective single center observational study
- 4233 consecutive patients, Jan 2018 - Dec 2021

AIM

- Evaluation of **A1C** as a predictor of postoperative leakage in SG, re-SG or SG-360





POPULATION

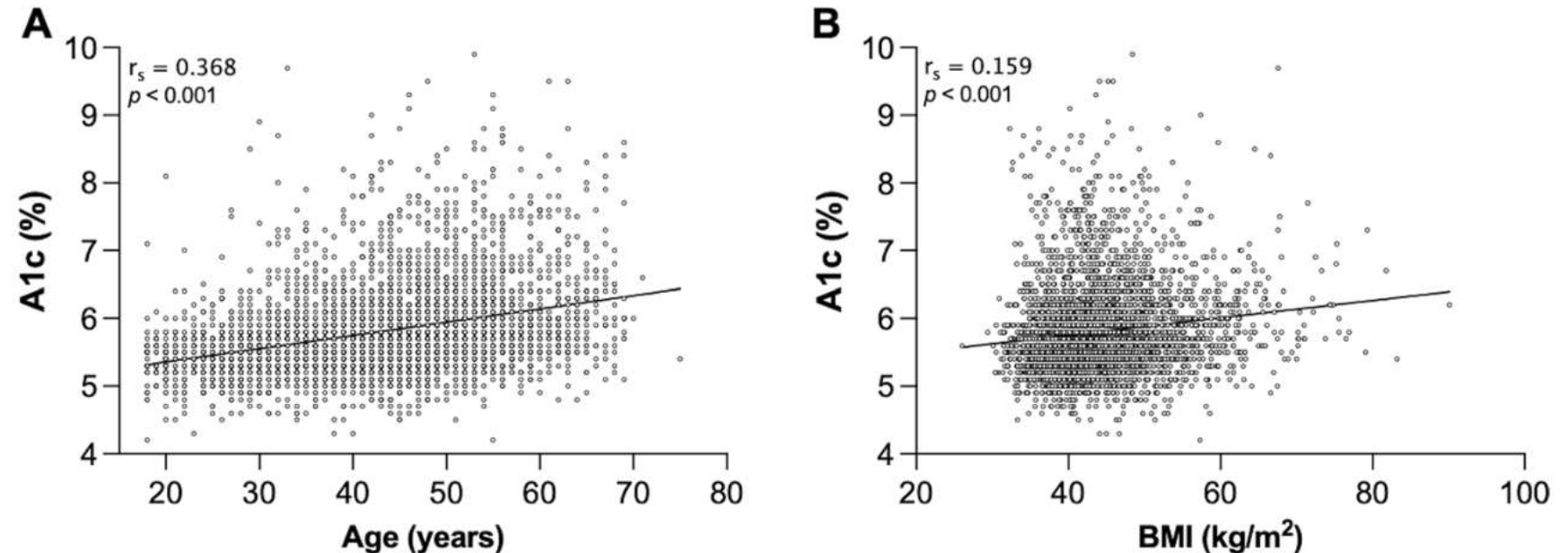
	Total <i>n</i> : 4233
Female	3022 (71.4%)
Age	43.2 ± 11.3
BMI (kg/m²)	44.4 ± 7.3
Sleeve gastrectomy	3719 (87.9%)
Re-sleeve gastrectomy	307 (7.3%)
Sleeve gastrectomy + funduplication	207 (4.8%)
Pre-diabetics (A1C 5.7%-6.5%)	1718 (40.6%)
Diabetics	
A1C ≥ 6.5%	522 (12.3%)
A1C ≥ 7%	260 (6.1%)
A1C ≥ 8%	59 (1.4%)



POPULATION

- ✓ Higher A1C values were associated with older age, male gender, higher BMI and increased rate of comorbidities

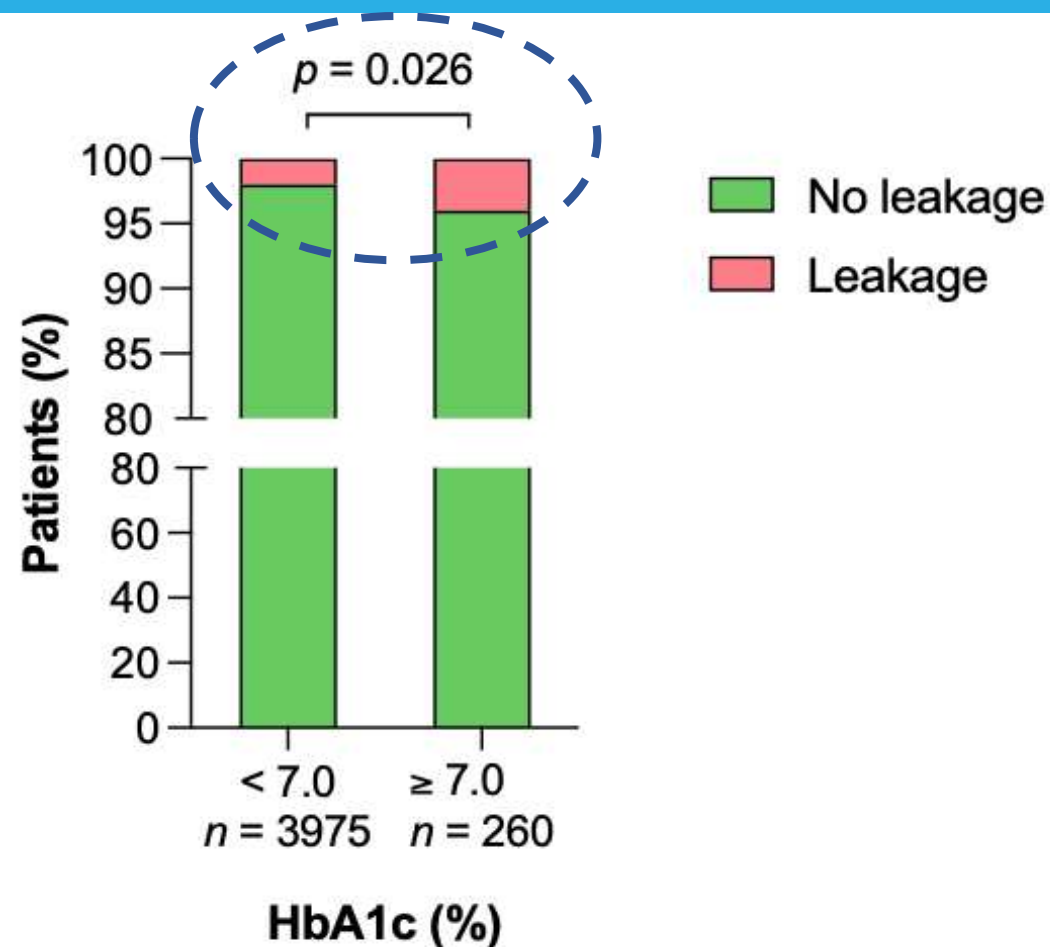
Fig. 1 **A** Bivariate Spearman correlation between A1C and age. **B** Bivariate Spearman correlation between A1C and body mass index (BMI). A1C = Glycated Hemoglobin. BMI = Body Mass Index (Kg/m²)



RESULTS

- Association between A1C and leakage:
 - $< 7\% \rightarrow 2\%$
 - $\geq 7\% \rightarrow 3.8\%$ ($p=0.030$)
 - $\geq 8\% \rightarrow 5.1\%$ ($p=0.086$)

- Operative time increases if $A1C \geq 7\%$
(53 ± 20 vs 51 ± 18 min)





CONCLUSIONS

Patients candidates to bariatric surgery need to be tested for A1C



Patients with A1C \geq 7% should be referred to a diabetologist to decrease risk of leakage

THANK YOU FOR YOUR ATTENTION

