

## Prognostic Value of Negative Coronary CT Angiography in Severely Obese Patients Prior to Bariatric Surgery: a Follow-Up After 6 Years

Michael Messerli, Céline Maywald, Stephan Wälti, Rene Warschkow, Simon Wildermuth, Hatem Alkadhi, Sebastian Leschka & Marc Schiesser

### BACKGROUND

This study aims to determine the long-term prognostic value of coronary CT angiography (CCTA) prior to bariatric surgery in severely obese patients with a body mass index (BMI)  $\geq 35$  kg/m<sup>2</sup>.

### MATERIAL AND METHODS

Seventy consecutive patients undergoing cardiac CT for coronary assessment prior to bariatric surgery were prospectively included. Images were analysed for the presence of coronary calcification and for non-obstructive (<50%) or obstructive (>50% stenosis) coronary artery disease (CAD). A median clinical follow-up of 6.1 years in 54 patients was obtained for major adverse cardiovascular events (MACEs), defined as death, non-fatal myocardial infarction or coronary revascularisation. Weight loss and BMI decrease following bariatric surgery were recorded.

### RESULTS

The median BMI prior to surgery was 46.9 kg/m<sup>2</sup>. The median percentage of excess BMI loss after surgery was 75%. CT showed coronary calcification in 26 (48%) patients, whereas 28 (52%) patients had no calcification. CCTA revealed normal coronaries in 47 (87%) and non-obstructive CAD in 7 (13%) patients. No obstructive CAD was found. All patients successfully underwent bariatric surgery, and no MACE occurred neither perioperatively nor in the follow-up period. The negative predictive value of CCTA was 100% (95% confidence interval of 90.1-100.0%).

### CONCLUSIONS

In severely obese patients, the absence of obstructive CAD in cardiac CT prior to bariatric surgery with subsequently marked weight reduction has strong long-term prognostic implications for ruling out major adverse cardiac events in the postoperative period.

Kantonsspital  
St.Gallen



<b>type</b>	journal paper/review (English)
<b>date of publishing</b>	25-8-2017
<b>journal title</b>	Obes Surg (27/8)
<b>ISSN electronic</b>	1708-0428
<b>pages</b>	2044-2049