

Revisional Robotic Bariatric Surgery.

Largest Single Centre Prospective Cohort Study and Review of the Literature.

Ramon Vilallonga^{1,2*‡}, Clara Pañella^{1‡}, Ana Ciscar¹, Kevin Díaz³, Daniel Herms³, Javier Solis³, Andreea Ciudin^{4,5,6,7}, Marta Comas^{4,8}, Manuel Armengol Carrasco³

¹Endocrine, Metabolic and Bariatric Unit. Department of General and Digestive Surgery, Vall d'Hebron University Hospital, Universitat Autònoma de Barcelona
Center of Excellence for the EAC-BC. Passeig de la Vall d'Hebron 119-129, 08035 Barcelona, Spain

²ELSAN, Clinique Saint Michel, Centre Chirurgical de l'Obésité, Toulon, France

³Department of General and Digestive Surgery. Vall d'Hebron University Hospital, Universitat Autònoma de Barcelona, Passeig de la Vall d'Hebron 119-129, 08035 Barcelona, Spain

⁴Endocrinology and Nutrition Department, Hospital Universitari Vall D'Hebron, Barcelona, Spain

⁵Diabetes and Metabolism Research Unit, Vall d'Hebron Institut De Recerca (VHIR), Barcelona, Spain

⁶Department of Medicine, Universitat Autònoma De Barcelona, Barcelona, Spain

⁷Centro de Investigacion Biomedica en Red de Diabetes y Enfermedades Metabolicas Asociadas (CIBERDEM), Instituto de Salud Carlos III (ISCIII), 28222, Madrid, Spain

⁸Research Group M3O, Methodology, Methods, Models and Outcomes of Health and Social Sciences, Faculty of Health Sciences and Welfare, University of Vic–Central University of Catalonia, 08500 Vic, Spain

Abstract

Introduction: Robotic bariatric surgery (RBS) has seen a surge in popularity in recent years, yet questions persist about its utility concerning postoperative complications, costs, and technical aspects. RBS, while increasing in number, presents a greater technical challenge associated with more post-operative complications compared to primary bariatric surgery. In this study, we present our single institution experience and review the literature to assess the value of robotic revisional surgery.

Material and Method: The retrospective review involved 42 patients (31 females, 11 males) who underwent various procedures, with the most frequent being the conversion of sleeve gastrectomy to gastric bypass (n=30). Encouragingly, no leaks or severe complications were identified. Furthermore, a systematic review indicated comparable outcomes, with decreased complication rates favoring robotic revisional surgery.

Results: In direct comparison to standard laparoscopic revisional bariatric surgery, revisional robotic surgery demonstrated superior results in terms of efficacy, safety, and reduced hospital stay. However, rates of mortality, morbidity, and reintervention did not significantly differ between the two approaches.

Conclusions: Considering these findings, we advocate for surgeons to acquire proficiency in the robotic technique, as part of the broader process of democratization and standardization of bariatric surgery. Embracing revisional robotic bariatric surgery can lead to improved patient outcomes, and its wider implementation may lead to enhanced surgical care and patient satisfaction in the field of bariatric procedures.

Key words: baroatric surgery, robotic surgery, Da Vinci, Revisional Surgery, complications