

Portal Vein Thrombosis a Rare but Life-threatening Complication after Laparoscopic Sleeve Gastrectomy: A 5 Years Study in a Bariatric Center of Excellence

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Abstract

Background and Aim: Laparoscopic sleeve gastrectomy (LSG) is actually the most performed bariatric procedures in the world, and porto-mesenteric vein thrombosis (PVT) has been increasingly reported as a rare but serious complication. The best algorithm for PVT's prevention and therapy is still under discussion. The aim of this study is to explore the incidence and the outcomes of the PVT after LSG in a Bariatric Surgery Center of Excellence (BS-CoE) and elaborate a diagnostic and therapeutic algorithm for PVT after LSG.

Methods: We retrospectively reviewed all the consecutive patients who underwent elective LSG within the last five years, between November 2014 and October 30th 2019, in Ponderas Academic Hospital, Bucharest, Romania. All the patients received an extended DVT prophylaxis protocol with adjusted doses of LMWH. Anti-factor Xa concentrations measurement to monitor the activity of LMWH in all the high-risk patients was used for the last two years. The patients suspected of PVT were scanned by computed tomography using IV contrast. All PVT patients were initially treated with systemic anticoagulation (Heparin), further interventions, such as systemic thrombolysis or surgery, being considered. After the acute stage, the PVT patients received long-term anticoagulation.

Results: Of the 3861 patients who underwent elective LSG, three were readmitted 7-60 days after the bariatric procedure for PVT, equating to an incidence of 0.077%. The average age of the patients developing PVT was 40 years (SD 11.97), the average body mass index (BMI) was 40.34 (SD 7.994) kg/m² and all of them underwent the same protocol for LSG. Two patients underwent conservative therapy with heparin anticoagulation and no surgery was needed. The third patient had a fulminant evolution in ICU, due to an extensive PVT, with death within two hours from his admission despite all resuscitation measures taken. The two patients remained on long life anticoagulant therapy.

Conclusion: A high clinical suspicion of PVT after LSG is required with prompt diagnosis and treatment. The BS-CoE protocol with adjusted doses of LMWH and extended prophylaxis proved to be very efficient showing a very low incidence of PVT.

Key words: Portal vein thrombosis, preventive protocol, Sleeve gastrectomy, center of excellence, bariatric surgery