PORTO-MESENTERIC VEIN THROMBOSIS AFTER MINIMALLY INVASIVE BARIATRIC SURGERY: A RARE COMPLICATION

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Introduction: Minimally Invasive Bariatric Surgery (MIBS) has long been established as the gold standard treatment for morbidly obese patients and their associated comorbidities. While it offers substantial benefits, it is not without risks. A rare and most likely under-reported complication is Porto-Mesenteric Vein Thrombosis (PMVT), which can prove to be life-threatening. Though many cases of PMVT following bariatric surgery have been published in scientific literature, its pathogenesis, presentation and management remain unclear. The primary objective of this study was to determine the incidence, risk factors and clinical presentation and to assess the outcomes of affected patients.

Material and Methods: We conducted a retrospective analysis of electronic health records of patients who had undergone MIBS spanning a 7-year period. Patients who subsequently developed PMVT, confirmed through radiological imaging, were included. Demographic information, pre-operative comorbidities, perioperative anticoagulation strategies and clinical outcomes were analyzed.

Results: Among 1809 MIBS patients, 14 (0.77%) were diagnosed with PMVT. Seven (50%) underwent laparoscopic surgery and 7 (50%) underwent robotic surgery. The mean time to diagnosis was 12.5 days post-surgery. All patients presented with abdominal pain. Risk factors associated with PMVT included a history of thromboembolic events and pre-existing pro-thrombotic conditions, such as Factor V Leiden and Thrombophilia. None of the pro-thrombotic conditions were diagnosed preoperatively. Preoperative anticoagulation therapy, using subcutaneous low molecular weight heparin, was administered to all patients. Three patients (21.4%) required endovascular thrombectomy. Figure 1 illustrates the clot burden on these patients. One patient (7%) died due to a calf DVT that caused a saddle pulmonary embolus.

Conclusion: Porto-Mesenteric Vein Thrombosis, though rare, remains a significant complication following minimally invasive bariatric surgery. PMVT should be considered after MIBS in patients with abdominal pain. While most patients respond well to pharmacological treatment and conservative management, a subset may require endovascular interventions and a more aggressive treatment plan. Further research is needed to identify pre-operative risk factors, refine preventive measures and standardize treatment modalities in this challenging patient population.

Figure 1. Extent of Portal System Involvement in thrombotic events

