A 44-year-old man with morbid obesity (BMI 49), hypertension, obstructive sleep apnoea-hypopnea and stasis phlebitis visited our hospital for revisional bariatric surgery for inadequate weight loss. He had had vertical banded gastroplasty (VBG) 20 years ago at other hospital. However he regained weight 7 years after the surgery probably due to staple line disruption and has been lost to follow-up. Preoperative gastroscopy confirmed staple line breakdown. Open sleeve gastrectomy as revisional surgery was successfully carried out. The patients underwent thromboprophylaxis using subcutaneous heparin calcium injection (5000 IU preoperatively, followed by 10000 IU daily postoperatively for 3 days). He developed fever and vague abdominal pain 14 days after the operation. His C-reactive protein and D-dimer were elevated to 20.4 mg/dl and 18.8 μg/ml, respectively. Computed tomography (CT) revealed superior mesenteric venous thrombosis and mesenteric panniculitis. Intravenous heparin and oral warfarin were immediately started. The patient’s symptom and laboratory data were improved thereafter. Follow-up CT showed no further development of thrombosis. He continues on oral warfarin (5 mg per day). At three months after the operation, he achieved 30 kg weight loss and did well. Mesenteric venous thrombosis is a rare condition that should remain in the differential diagnosis for patients presenting with abdominal pain after the bariatric surgery. The prompt diagnosis and anticoagulant therapy can produce favorable outcomes.