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"Portal Vein Thrombosis As a Complication of Laparoscopic Sleeve Gastrectomy"

Introduction: Portal vein thrombosis (PVT) is an uncommon complication after Laparoscopic Bariatric Surgery (LBS). Portal vein thrombosis (PVT) affects about 0.1-2% of patients following surgery with up to 40% morbidity. This is higher than the rate of PVT in other abdominal procedures. The mechanism is poorly understood. Pre-procedure risk factors of PVT following LBS include history of liver disease, underlying coagulopathy use of oral contraceptives, and comorbidities associated with morbid obesity. This study aims to evaluate pre- and postoperative changes in portal, splenic, and mesenteric venous blood flow in patients undergoing LSG. The goal of this project is to try to identify risk factors for development of portal vein thrombosis after gastric sleeve or gastric bypass in morbidly obese patients.

Methods: This is an IRB approved, prospective pilot study enrolling patients over the age of 18 undergoing LSG at a large urban tertiary care hospital in Louisiana. After obtaining informed consent and HIPAA authorization, each participant will undergo ultrasound assessment at three timepoints. The standardized protocol is as follows:

1. Perform US assessment within a week before surgery (gastric sleeve or bypass).
2. Patient needs to be NPO
3. Duplex ultrasound evaluation of portal vein, superior mesenteric vein and splenic vein flow velocity and diameter during normal respiration and during breath-hold. Velocities are stored in cm/sec
4. The same protocol is repeated the day after surgery, before patient's discharge and 6 weeks after surgery.

Data Collection: Primary outcome variables include changes in vessel diameter and flow velocity across the portal, splenic, and mesenteric veins. Additional clinical data collected include demographics, BMI, surgical duration, length of hospital stay, postoperative complications, and comorbidities such as liver disease, hypercoagulable states, and malignancy.

Results: Data collection is ongoing. Two illustrative cases will be included on the final poster to demonstrate preliminary trends