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"A Complex Case of Portal Vein Thrombosis in the Postpartum Period"

Introduction: Hypercoagulability secondary to pregnancy is an anticipated protective physiological adaptation that reduces the risk of postpartum hemorrhage in the laboring mother. The resulting prothrombotic state typically presents as deep vein thrombosis or pulmonary embolism[2]. In this report, we aim to describe the case of a multiparous woman with a rare presentation of portal vein thrombosis (PVT).

Case: A 27-year-old woman (G2P0202) with no previous history of thrombosis or known thrombophilic condition presented to the Emergency Department 26 days postpartum with severe abdominal pain that limited ambulation. The patient's most recent obstetric course was complicated by preeclampsia and iron deficiency anemia. She had an uncomplicated spontaneous vaginal delivery at 36 weeks gestational age and was discharged with persisting postpartum hypertension. On examination she was febrile, tachycardic, tachypneic, and peritonitic. Computed tomography of the abdomen and pelvis revealed a portal vein thrombus that extended into the proximal splenic vein and diffusely involved the superior mesenteric vein and its branches. An emergent exploratory laparotomy confirmed ischemic small bowel involving the mid jejunum, and 45cm of necrotic tissue was resected. Due to postoperative hematemesis, anticoagulation was held. Interventional radiology performed a suction thrombectomy to restore patency of the portal vein and prevent further ischemia as thrombotic management with anticoagulation was discontinued due to blood loss and increasing transfusion requirements. The patient's postoperative course was further complicated by anastomotic bleeding at the primary site and large abdominal hematoma formation, both of which were managed conservatively. Additionally, she developed an acute kidney injury secondary to ischemia, pleural effusion, and decompensated heart failure. The patient was discharged with recommendations to continue anticoagulation with rivaroxaban for 30 days. Since, she has followed out-patient with cardiology and primary care for hypertensive management. In discussion of obstetric care, she was advised that future pregnancies would pose significant, life-threatening risks.

Discussion: Portal vein thrombosis is an uncommon manifestation of postpartum hypercoagulability. Other accounts reported of similar cases include women who presented with characteristic abdominal pain concerning for ischemia within the first two weeks postpartum, those whose obstetric course was complicated by cesarean section and resulted in postoperative immobility, and those with hematologic disorders[1,3,4,5]. This patient presented approximately four weeks postpartum, underwent vaginal delivery, and had a negative thrombophilia workup. In a patient who has already endured extensive ischemic damage, mitigating the risk of further thrombosis was of primary concern. Anticoagulation is the mainstay of treatment for portal vein thrombosis, rather than surgical or percutaneous thrombectomy. However, in this patient with postoperative bleeding, a procedural approach was warranted. This case underscores the importance of thoroughly evaluating abdominal pain in the postpartum period and effectively evaluating thrombotic risk to reduce the occurrence of life-altering sequelae.

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