

## Secondary Postpartum Hemorrhage due to Placental Site Vascular Subinvolution as a Diagnostic Challenge in Women with Preserved Uterus

Anita Morarcalieva Chochkova<sup>1\*</sup>, Marina Nakova<sup>1</sup>, Blazhe Chochkov<sup>2</sup>,  
Milena Miceva<sup>3</sup>, Radmila Milosheska<sup>4</sup>

<sup>1</sup> Department of Obstetrics and Gynecology, PHI General Hospital – Gevgelija

<sup>2</sup> Department of Internal medicine, PHI General Hospital - Gevgelija

<sup>3</sup> Department of Obstetrics and Gynecology, PHI General Hospital – Strumica

<sup>4</sup> Department of Endocrinology, City General Hospital 8 September - Skopje

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### Abstract

**Background:** Postpartum hemorrhage (PPH) is an important reason for maternal morbidity and mortality. It is directly responsible for one sixth of the mother's death. The primary postpartum hemorrhage, which starts in the first 24 hours of the puerperium is easy to diagnose and treat on time, because the patient is still hospitalized. But the secondary one, which starts 24 hours after delivery and until the end of puerperium is much more dangerous for the patients and the doctors also, because the patient is at her home already and usually comes to the hospital with profuse bleeding and often in shock statement.

**Case report:** We present a rare case of placental site vascular subinvolution (VSI) in woman after

uncomplicated spontaneous delivery where the uterus preservation was mandatory, the procedure to diagnose it, the management and therapy, also a brief review of the literature about the pathological mechanisms of the disease.

**Conclusion:** Placental site VSI is the rarest cause of secondary postpartum hemorrhage. The proposed mechanisms for developing VSI as an inadequate interaction between endovascular trophoblast cells and maternal spiral arterioles, the absence of deposition of complement and immunoglobulins in the vessels and overexpression of Bcl-2 antiapoptotic protein do not explain the etiology for developing a VSI. The clinicians misdiagnose it very often because

of the difficulties of diagnosing VSI in cases when uterus preservation is mandatory. Most often VSI is a diagnosis of exclusion and the therapy is in accordance with the recommendation for treatment of postpartum hemorrhage.

**Key words:** secondary postpartum hemorrhage, puerperium, vascular subinvolution, vaginal bleeding #placental site, uterus