

Vaginal vein thrombosis in pregnancy

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Summary

Vaginal vein thrombosis in a pregnant woman is reported. This entity should be differentiated from vaginal arteriovenous fistula which may cause severe antepartum, intrapartum and post-partum haemorrhage.

The humoral and mechanical factors which favour the occurrence of varicosities and thrombosis are briefly described. Surgical management is suggested as being both simple and effective.

KEY WORDS: venous thrombosis, vagina, pregnancy, varicose veins.

Introduction

Vulvar varicosities in pregnant women are infrequent, occurring in about 2% of pregnancies (Dodd and Wright, 1959), while vaginal varicosities are extremely rare. Thrombosis of vaginal varicosities during pregnancy was first described by Veltman and Ostergard (1972). As far as the present authors are aware, the following reported case is the second.

Case report

A 27-year-old gravida 3 para 2 had been aware of a mass protruding from the introitus since the 28th week of pregnancy. During the 34-35th week of pregnancy, the mass enlarged and became tender. On admission, varicosities of the lower extremities and vulva were noted. A 4 × 3 cm tender and thrombosed solitary mass was noted in the posterior vaginal wall protruding beyond the introitus (Fig. 1).

The mass was locally incised, a small thrombus was easily removed and the mucosa was sutured. The patient was discharged on the third postoperative day. Pathological examination confirmed the nature of the specimen.

The patient delivered spontaneously at term a 3500 g infant, without any complications.



FIG. 1. Thrombosed vaginal vein after clamping.

Discussion

Physiological changes in pregnancy favour the occurrence of varicosities and thrombosis in the lower pelvic area and legs. These changes include general venous dilatation, increased capacitance, slow-flow and increased venous pressure. Additional factors are the increased levels of fibrinogen, factors VII and VIII which share in the hypercoagulability in pregnancy (Todd *et al.*, 1965; Hyde *et al.*, 1973).

Softening of collagen may account for the increased vein distensibility during pregnancy, before the full uterine enlargement provides a mechanical explanation (McCausland *et al.*, 1961; Marazita *et al.*, 1946). The increased blood volume, the reduced velocity of venous flow (Wright, Osborn and Edmonds, 1950) and the rise in venous pressure of about 10 mmHg (McLennan, 1943) predispose to passive venous dilatation and stasis. In advanced pregnancy the enormous increase of internal iliac vein flow burdens the venous return from the lower limbs and

accounts for some of the increased venous pressure. In addition, the uterine enlargement directly interferes with venous return by compression of the pelvic veins and the inferior vena cava (Kerr, Scott and Samuel, 1964; Hytten and Lind, 1973). As the vulvar venous outflow empties into the superficial pudendal vein and thence to the greater saphenous vein, it shares in the altered venous haemodynamics. These changes during pregnancy favour the appearance of vulvar varicosities.

Among possible complications of such varicosities are haemorrhage, ulceration, thrombosis and deep and superficial thrombophlebitis. In most of these lesions, nonsurgical management is preferred due to their frequent tendency towards post-partum regression (Nabatoff and Pincus, 1970). However, in vulvar and vaginal thrombosis, surgical management is both simple and effective utilizing the techniques described by Veltman and Ostergard (1972).

Vaginal varicosities and thrombosis are extremely rare in pregnancy and their recognition and treatment should offer no serious problem during pregnancy or delivery. However, this entity should be differentiated from congenital arteriovenous fistula of the vagina, which may become progressively larger with each pregnancy and which presents as a soft fixed, compressible mass in the vaginal fornix which may cause antepartum, intrapartum or post-partum haemorrhage (Barber and Garber, 1974). No attempt should be made to correct this condition during pregnancy as the great increase in pelvic blood

supply at this time makes this procedure surgically difficult and dangerous.

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