

# Increased immunohistochemical expression of thrombomodulin at placental perivascular myofibroblast in severe preeclampsia (PE)

Bosco, Cleofina

Parra, M.

Barja, P.

Rodrigo, R.

Fernández, V.

Suarez, M.

Muñoz, H.

The presence of pro-coagulant and anti-coagulant components of the placental vascular endothelium and syncytiotrophoblast are essential for homeostasis. Vascular endothelium prevents blood clot formation in vivo by involving a cell surface thrombin-binding glycoprotein, thrombomodulin (TM), that activates plasma anti-coagulant protein C. The TM levels increase during pregnancy, but the fibrinolytic capacity diminishes. Since vascular lesions with placental coagulation disorders can be associated with preeclampsia (PE), we hypothesized that TM expression in the stem villous vasculature and syncytiotrophoblast of the placenta are impaired in PE. Plasma and placental tissue samples were collected from PE (n=12) and normotensive pregnant patients (n=11). Patient's gestational age was  $35.7 \pm 1.2$  (normotensive) and  $30.6 \pm 1.5$  weeks (PE). Blood samples were drawn 30 min before delivery. Serum PAI-1 and PAI-2 antigens were determined by enzyme-linked immunoabsorbent assay (ELISA). A monoclonal ant