THE DISTRIBUTION OF FIBRONECTIN AND LAMININ IN THE PLACENTAL BED OF PATIENTS WITH DIFFERENT HYPERTENSIVE DISORDERS OF PREGNANCY

R. Pijnenborg, V. Ballegeer, D. Davey[a], M. Hanssens, B. Spitz, A. Tiltman[a], L. Vercruysse & A. Van Assche (University of Leuven, Belgium and [a] University of Cape Town, South Africa)

Endovascular trophoblast invasion into the spiral arteries of the placental bed is restricted to the decidual segments in cases of gestational proteinuric hypertension (pre-eclampsia). Little is known about mechanisms that control trophoblast invasion. Extracellular matrix proteins such as fibronectin and laminin could be involved, as they are in other invasive processes. In addition, fibronectin deposition occurs and can act as a marker substance in difference vasculopathies, including atherosclerotic lesions. The observation by Ballegeer et al (*American Journal of Obstetrics and Gynecology*, in press) of rising blood fibronectin levels in patients that will develop pre-eclampsia, prompted us to study the distribution of these extracellular matrix proteins in the placental bed of normotensive patients as well as patients suffering from different hypertensive disorders of pregnancy. Paraffin embedded sections were stained for fibronectin and laminin, using the indirect peroxidase labeled antibody technique of Nakane & Pierce (1966, *Journal of Histochemistry and Cytochemistry*, 14, 929). Spiral arteries undergoing physiological changes were negative for fibronectin. In vessels with subintimal thickening an occasional fibronectin positive lining of endothelium and positive areas in the fibroblastic subintimal cushions could be found. The most intensive staining for fibronectin however was found in the arteries with acute atherosis, i.e. the vascular lesion that is thought to be associated with pre-eclampsia. Preliminary observations suggest a similar distribution pattern for laminin.

HISTOLOGICAL CHARACTERISTICS OF PLACENTAL BED SPIRAL ARTERIES RELATED TO THE CLINICAL CLASSIFICATION OF HYPERTENSIVE DISORDERS IN HUMAN PREGNANCY

R. Pijnenborg, J. Anthony, D. Davey, A. Rees, A. Tiltman, L. Vercruysse & A. Van Assche[a] (University of Cape Town, South Africa and [a]University of Leuven, Belgium)

During normal pregnancy endovascular trophoblast invasion in the spiral arteries up to the myometrial segments is associated with physiological changes in the arteries. Restriction of the normal invasion pattern has been documented in cases of preeclampsia and diverse vasculopathies have been described. Recently a new classification system for hypertensive disorders in human pregnancy has been developed by Davey & MacGillivray (1988, *American Journal of Obstetrics and Gynecology*, 158, 892). It was the purpose of the present study to relate histological characteristics of spiral arteries to this new clinical classification.

	Number of cases	Normal changes	Acute atherosis
Normotensive	6	6	0
Gestational Hypertension	2	0	1
Gestational HT + Proteinuria	18	1	7
Chronic Hypertension	4	2	0
Chronic HT + Proteinuria	5	0	3
Unclassified HT	2	1	1
Unclassified HT + Proteinuria	6	1	2