EXPRESSION OF FIBRONECTIN, COLLAGEN IV AND PERLECAN IN ANOIKIS-RESISTANT ENDOTHELIAL CELLS.

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Introduction: Anoikis is a programmed cell death induced upon cell detachment from extracellular matrix, behaving as a critical mechanism in preventing adherent-independent cell growth and attachment to an inappropriate matrix, thus avoiding colonizing of distant organs. Metastasis is a multistep process including dissociation of cancer cells from primary sites, survival in the vascular system, and proliferation in distant target organs. As a barrier to metastasis, cells normally undergo process anoikis. Anoikis resistance is a feature that contribute to tumor progression and metastasis. The extracellular matrix (ECM) consists of several proteins and glycoproteins. The interaction between soluble proteins and cell surface receptors affect many properties of cells, including migration, proliferation, apoptosis and differentiation. To invade the ECM, tumorigenic cell must bind to ECM components through receptor-ligand interaction. Matrix metalloproteinases (MMPs) act partially destroying the ECM, facilitating the cell invasion.

Objectives: This study aims to observe the expression of ECM molecules in endothelial cells derived from rabbit aorta (EC), EC transfected with EJ-ras oncogene (EJ-ras EC) and EC resistant to anoikis (Adh1⁻EC and Adh2⁻EC).

Materials and Methods: Western Blot (WB) was used to analyse ECM molecules expression; Immunofluorescence was used to locate fibronectin, collagen IV and perlecan in cells.

Results: Anoikis resistant and transfected endothelial cells shows a decrease in the expression of fibronectin, collagen IV and perlecan, in relation to parental cells.

Conclusions: These results suggest that the acquisition of anoikis resistance affects the extracellular matrix of endothelial cells.

Key words: anoikis, extracellular matrix, endothelial cells.

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