ANALYSIS OF HLA-G GENE POLYMORPHISM AND PROTEIN EXPRESSION IN INVASIVE BREAST DUCTAL CARCINOMA

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ABSTRACT

The human leukocyte antigen G (HLA-G) is a non-classical HLA class I molecule predominantly expressed in trophoblastic placental cells to protect the fetus during pregnancy. However, evidence has shown that this molecule may be implicated in the immune escape mechanism of tumor cells. Thus, the aim of this study was to evaluate the frequency of 14-bp insertion/deletion HLA-G polymorphism, as well as the expression of this molecule in patients with invasive breast ductal carcinoma (IDC). A significant association between the expression of HLA-G and the presence of metastasis in lymph nodes (p=0.01) was observed and the expression of HLA-G was significantly higher in patients with shorter survival time (p=0.03). The analysis suggests that the polymorphism observed in patients with IDC may be inducing a higher expression of the HLA-G molecule, which may possibly contribute to shorter survival time and a worse clinical prognosis for such patients.

Keywords:
Breast cancer. HLA-G. Polymorphism. Tumor escape.