INTRODUCTION: cutaneous metastasis is defined as the spread of malignant cells from a neoplasm to the skin that has no contiguity with the primary tumor. Skin metastases from internal neoplasms are an uncommon clinical finding with an overall incidence of 5.3%. The most common cause is breast cancer with an incidence of 24%. In clinical practice they show a wide range of different patterns but nodules are the most common presentation.

MUC1 is a transmembrane mucin that is often overexpressed in carcinomas and has been involved in metastatic progression. The extracellular domain of MUC1 can interact with stromal and endothelial cell adhesion receptors facilitating vascular invasion and the citoplasmic domain can induce cytoskeletal rearrangements promoting an invasive phenotype in the tumor cell.

OBJECTIVE: to identify tumor antigens as markers of cutaneous metastases in breast cancer patients

MATERIALS AND METHODS

A total of 54 patients were included; 24 belonged to patients with cutaneous metastases (MTS) in which samples of cutaneous metastases, primary tumors an metastatic lymph nodes were studied; 30 breast cancer patients with lymph nodes metastases and without cutaneous metastases were studied as controls. An immunohistochemical (IHC) approach following standard procedures was performed employing two anti-MUC1 MAbS (HMFG1 and SM3 MAbS), anti s-Lex (KM93 MAb), anti-Lex (KM380 MAb) and anti-TF MAb (Dako). An statistical analysis was performed. Differences between groups were assessed by the non parametric x² test while Kendall’s tau B was evaluated for correlation analysis. All significance levels were set to p<0.05.

RESULTS

In samples belonging to patients with cutaneous metastases, all samples expressed MUC1 employing HMFG1 MAb; 25% of primary tumors and 54% of metastatic lymph nodes were positive to sLex while 23% of cutaneous metastatic samples showed reactivity (figure 1, tables 1 and 2); a significant difference was found between primary tumors and lymph nodes and also between cutaneous and lymph nodes cutaneous metastases (p<0.05), (figure2). SM3 MAb showed reactivity in 75% of primary tumors in patients with cutaneous metastases while in controls SM3 MAb stained positively in 38.9% (p<0.05) (figure 3). Regarding the SM3 MAb staining pattern it was observed higher frequency of mixed and cytoplasmic reactivity in patients who developed cutaneous metastases compared to controls without skin metastases, which showed a preponderance of linear pattern (figure 4).

CONCLUSION:

• sLex expression is mainly associated to lymphatic dissemination
• SM3 Mab is usefull to discriminate between primary tumors which would develop cutaneous metastases

Bibliography: