

erate cellularity with isolated cells or clusters of epithelial cells. The smears showed both small dense clusters and large loose, irregular clusters with fuzzy margins or a spindle cell core. The lesion was composed of uniform, small cells with round to oval nuclei with finely granular chromatin. Epithelial cells contained abundant cytoplasm with distinct cytoplasmic borders with a plasma cell-like appearance in isolated cells. Fibrillary chondromyxoid ground substance was observed. Mytotic figures were absent. The surgical specimen showed a typical picture of pleomorphic adenoma. Thus in the aspirate, a dual population of epithelial and myoepithelial cells were identified in cell aggregates and numerous bare nuclei were present. Cytologic differential diagnosis of pleomorphic adenoma is wide. The main cytologic differential diagnoses include fibroadenoma and low grade phyllodes tumor. Aspirates from these lesions may contain large cellular aggregates with a dual population of epithelial and myoepithelial cells, abundant bare nuclei and stromal elements. Adenosis tumor, collagenous spherulosis, adenomyoepithelioma and adenoid cystic carcinoma should be considered on the differential diagnosis of breast aspirates containing a dual population of cells.

ASSOCIATION BETWEEN HER2/NEU EXPRESION AND HORMONE RECEPTOR STATUS IN BREAST CANCER PATIENTS

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Determination of HER2/neu expression by immunohistochemistry is mandatory for application of Herceptin[®] therapy in breast cancer patients. The purpose of this study was to investigate the association between HER2/neu expression and hormone receptor status, as well as with other clinicopathological parameters in breast cancer patients. HER2/neu, p53 and Ki-67 expression was determined in 169 postoperative stage I-III (UICC, 1997) breast cancer patients using the standardized DAKO HerceptTest[®] and immunoperoxidase technique, respectively. The results of HER2/neu immunoreactivity were evaluated by performing the standardized scoring system (0 = negative, 1+ = weakly positive, 2+ = positive, 3+ = strongly positive staining), while ER and PgR were scored in a semiquantitative fashion (ER-ICA and PR-ICA). The results from HER2/

neu expression were correlated to hormonal receptor status and clinicopathological parameters (tumor size, histopathologic grade, nuclear grade, histologic type of the tumor, lymph node status and patient age). Statistical significance was determined with χ^2 and Fisher's exact test. HER2/neu expression was positive in 66 patients (37%). There was no significant association between the values of HER2/neu and ER/PgR status, or with any other clinicopathological parameter. ER status significantly correlated with PgR status ($p < 0.01$), tumor size ($p < 0.01$), lymph-node involvement ($p < 0.01$) and tumor type ($p < 0.01$). PgR status was related to the histopathologic grade ($p < 0.01$), lymph-node status ($p < 0.01$), tumor type ($p < 0.01$) and patient age ($p < 0.01$). HER2/neu is a relatively new promising marker in predicting the response to target specific therapy. However, its predictive value remains a complex and inconclusive subject. According to our results, the prognostic potential of HER2/neu seems to be independent from hormone receptor status and any other clinicopathological parameter in breast cancer patients.

IMMUNOHISTOCHEMISTRY OF MALE BREAST CANCER

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Although common in females, breast cancer is very rare in males. It accounts for less than 1% of all cancer cases in males and less than 1% of all breast cancer cases. Due to its rarity there is very little information available regarding male breast cancer. The objective of this study was to shed some light on male breast cancer statistics by using breast cancer cases found in the cancer cases registry of the Sestre milosrdnice University Hospital and comparing them to other similar studies. Data were collected in 21 (0.88%) male patients, out of a total of 2380 male and female patients in whom breast cancer was diagnosed as the result of biopsies performed at the Ljudevit Jurak University Department of Pathology during the 1980-2001 period (22 years). Special attention was paid to the last six cases of male breast cancer found in the 1995-2001 period. Formalin fixed and paraffin embedded tumor tissues were cut into 5-mm sections, deparaffinized and stained with hematoxylin and eosin. Immunohistochemistry for estrogen, progesterone, prostate specific antigen