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P295. Research on Correlation between the Blood Concentration of Progesterone Receptor Membrane Component-1 and the Molecular Subtypes of Breast Cancer Patients

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Context?Clinical studies have found that progesterone in menopausal hormone therapy(MHT) for postmenopausal women is a major risk factor for the risk of breast cancer. In vitro experiments have confirmed that progesterone receptor membrane component (PGRMC1) plays an important role in promoting breast tumor growth.
Objective: To investigate the blood PGRMC1 concentration in patients with breast cancer and benign breast disease patients. To detect the relationship between blood PGRMC1 concentration and the molecular subtypes of breast cancer patients.
Method: The whole blood PGRMC1 concentration was measured by enzyme linked immunosorbent assay(ELISA) and the serum CEA, CA125 and CA153 were measured by chemiluminescent immunoassay(CLIA) in all patients. The patients were diagnosed by postoperative clinical pathology and breast imaging. According to molecular subtypes of breast cancer patients, two types of grouping were made: ER negative group and ER positive group; PR negative group and PR positive group. All participants signed informed consent.
Patients: 28 healthy women (the median age was 41), 35 women with benign breast diseases (the median age was 43) and 132 women with breast cancer (the median age was 48) were included in our study.
Result(s): The blood concentration of PGRMC1 has no significant difference between control group and the benign group(75.94±12.19 vs 76.76±12.76 pg/ml, p>0.05), but the blood concentration of PGRMC1 in cancer group was significantly higher than that of the benign group (93.03±36.79 vs 76.76±12.76 pg/ml, p?0.05). The serum concentration of CEA (2.66±2.96 vs 1.45±0.73 ng/ml, p?0.05), CA153 (14.47±10.97 vs 7.92±3.52 U/ml, p?0.05) in the cancer group were significantly higher than that of the benign group. But there had no significant difference in serum CA125(13.70±5.51 vs 14.86±12.56 U/ml, p>0.05) between these two group. The blood concentration of PGRMC1 in ER positive group was significantly higher than ER negative group(99.82±33.26 vs 85.13±37.45 pg/ml, p?0.05). The blood concentration of PGRMC1 in PR positive group was significantly higher than PR negative group (99.89±32.53 vs 86.84.75±38.08 pg/ml, p?0.05).
Conclusions: The PGRMC1 has potential value for diagnosis in breast cancer. The blood concentration of PGRMC1 was positive correlated with ER and PR expression in breast cancer lesion. PGRMC1 has the possibility to be a blood biomarker of the breast cancer.

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