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Thesis Title	<i>Immunohistochemical Expression of BRCA1 Oncogene in Breast Cancer Specimens Demographic and Clinicopathological Study</i>			
Year	2015			
Abstract	<p>Breast cancer is the leading female cancer worldwide. In Iraq, it is the most common cancer among the Iraqi population; with a trend for the disease to affect younger women. It has been documented that a familial history of breast cancer and some mutations, particularly in BRCA1, significantly increase the risk of the disease.</p> <p>Aim of the Study : To demonstrate the frequency of BRCA1 in a group of high risk women with “positive family history” of breast cancer and correlating the immune expression of BRCA1 with some clinic-pathological parameters of known prognostic significance (age, family history of breast cancer, parity, age of menarche, histological type ,hormone receptors and Her2/ neu immunohistochemical expression of the tumor)</p> <p>Patients and Methods: Eighty-two female patients diagnosed with breast cancer (50 familial and 32 sporadic) were included in the study. Paraffin-embedded tissue blocks containing breast tissues from those patients were collected from February 2014 to August 2014. The age of the study group ranged between 24 and 67 years with a mean 48.07±8.972. Immunohistochemistry was performed to assess the BRCA1 oncogene expression, ER, PR and Her2/ neu content of the tumors.</p>			

Results:

Out of the study group, 50 (60.9%) revealed family history of breast

cancer. Forty-eight percent of the patients with positive family history

were in the age group of 45 years or below; of those,15 (62.5%) gave

family history of cancer in their first degree relative while 9 (37.5%) had

second degree relatives. Gynecological history revealed that 21.9% of

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the patients had their menarche before the age of 12 years, 22.2% were

nulliparous and 78% of those breast cancer patients had no history of

using oral contraceptive pills.

Positive Immunohistochemical expression of BRCA1 was demonstrated

in 39.02% of tumor specimens belonging to all patients who had breast

carcinoma. In patients with positive family history for breast carcinoma

BRCA1 positive expression was demonstrated in 54% while in patients

with negative family history it was 15.6%. The BRCA1 expression was

significantly correlated with family history in first and second degree

relatives. BRCA1 positive Immunohistochemical expression correlated

significantly with negative Immunohistochemical expression of estrogen

receptor and progesterone receptor ; 71.9% of those had negative ER

expression and 57.9% exhibited negative PR Immunohistochemical

expression.

Conclusions:

BRCA1 Immunohistochemical expression had significant correlation

with age, family history of the breast cancer and hormone (estrogen and

progesterone) receptor contents. On the other hand, it had no significant

correlation with the histological tumor type, grade and stage of the

disease.

