Haptoglobin polymorphism in breast cancer patients form Jordan.
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Abstract

BACKGROUND:

Previous reports regarding the occurrence of breast cancer and its association with Hp polymorphism are conflicting. The possible role of family history as a factor in determining the degree of association between the disease and Hp polymorphism has not been reported before. In this study, the distribution of haptoglobin phenotype among patients with familial and nonfamilial breast cancer was investigated.

METHODS:

Haptoglobin phenotypes were determined in serum of 128 breast cancer patients (familial, n=42; nonfamilial, n=86) and in controls (n=200) by vertical polyacrylamide gel electrophoresis.

RESULTS:

No significant difference of Hp phenotype distribution was observed between patients as a combined group when compared with the control group. In the familial group, the frequency of Hp1-1 and Hp2-1 phenotype distribution was higher and Hp2-2 was lower than that in the nonfamilial and the control groups. Similar but inversed Hp distribution pattern was observed in the nonfamilial group when compared with that in the other groups. An appreciable finding is the observation that Hp2-2 phenotype frequency in the nonfamilial group was significantly higher than that in the familial group (p=0.0365).

CONCLUSIONS:

Results of this study demonstrate that the pattern of Hp phenotype distribution in breast cancer patients is family history-dependent. Hp1 and Hp2 allele frequencies were over-represented in patients with familial and nonfamilial breast cancer, respectively. The pattern is probably attributed to genetic and oxidative stress mechanisms.