

Breast cancer mortality among Ashkenazi Jewish women in São Paulo and Porto Alegre, Brazil

ABSTRACT

A quite similar breast cancer mortality pattern was observed between Ashkenazi Jewish women and the general population in São Paulo and Porto Alegre, Brazil. These results may suggest an environmental role on germ mutation expression reported in this ethnic group.

INTRODUCTION

Introduction The understanding of the role of several cancer risk factors has been enhanced by the analysis of their distribution in different ethnic groups, as observed in several sites such as the brain, colon, breast, ovary and others. Despite the fact that some genetic differences have been identified, ethnic differences more often point out differences in the patterns of environmental exposures such as diet and other lifestyle-related factors. Several studies carried out in the past decade have reported higher rates of BRCA1 and BRCA2 gene mutations (mainly 185 delAG, 5382insC and 6174delT) in Ashkenazi (Eastern and Central Europe ancestry) Jewish women than in the general population in different countries. This fact has also been associated with a higher lifetime risk of developing ovarian and breast cancer among Ashkenazi women, the latter ranging from 38% by age 50 to 59% by age 70. Different from the reported scientific literature about a higher breast cancer incidence among Ashkenazi women in North America and Europe than in the general population, breast cancer seems to present a moderate pattern of occurrence among Brazilian Ashkenazi women. The objective of this investigation is to evaluate evidence supporting this observation. This paper presents preliminary results of a comprehensive ascertainment of cancer mortality in two main Jewish communities in Brazil, São Paulo and Porto Alegre, that was carried out by searching mortality and personal data archived in local Jewish burial societies (Chevra Kadisha).

CONCLUSION

Conclusions Considering the reported higher frequency of BRCA1 and BRCA2 germline mutations related to breast and ovarian cancer among Ashkenazi women in different countries, the results presented in this study were interpreted as showing a relatively lower than expected breast cancer mortality pattern among Ashkenazi women in the studied Brazilian cities. If the breast cancer incidence among Ashkenazi women in Brazil, which was not evaluated in this study, has been showing a similar pattern to breast cancer mortality, a hypothesis can be raised that germ mutations previously reported among Ashkenazi women may be modulated by some environmental factors that perhaps could act as protective factors, delaying the mutation expression.