The impact of genetic counseling on patient knowledge of hereditary breast and ovarian cancer

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BACKGROUND

- Patients at risk for hereditary breast and ovarian cancer (HBOC) referred to the Genetic Risk Assessment Service (GRAS) are provided with genetic counseling as part of their consultation.
- Genetic counseling sessions include: collection of personal/family history, risk assessment of inherited cancer syndromes, genetic testing options, discussion of confidentiality considerations and safeguards, variability of test results and potential impact on familial and personal risk management options.
- An 11 item standardized questionnaire, which has been used and validated in previous research, was developed to measure patient knowledge of HBOC.
- This questionnaire measures four aspects of HBOC genetics knowledge: (1) prevalence of the BRCA gene mutations; (2) patterns of inheritance; (3) cancer risks associated with BRCA mutations; and (4) risk management options.

OBJECTIVE

- To evaluate patient knowledge of HBOC pre-genetic counseling (GC) and post-GC to explore factors predictive of higher knowledge scores.

METHODS

- 256 female patients referred to GRAS and evaluated for HBOC were included in this study.
- Patient knowledge was measured at two time points (pre- and post-GC session) using the 11 item standardized questionnaire.
- Multiple linear regression was used to identify significant predictors of higher knowledge scores pre-GC.
- Paired-sample t-test was used to access mean differences in knowledge scores between Timepoint1 and Timepoint2.

RESULTS

- Patient knowledge scores significantly increased post-GC.
- Based on the multivariable regression model, for every ten year increase in age, pre-GC knowledge scores increased by 3% (p=0.05).
- Pre-GC knowledge scores for patients with at least a college degree were 15% higher than patients with a high school diploma or less (p=0.01).
- Pre-GC knowledge scores for patients with a mutation risk greater than 11% were 12% higher than patients with a mutation risk lower than 11% (p<0.01).
- Regardless of age, cancer diagnosis status, personal history and mutation risk, patients' knowledge of HBOC increased significantly (p<0.01).

DISCUSSION

- These findings suggest that information provided during genetic counseling sessions significantly increase patients' hereditary breast and ovarian cancer knowledge.
- While patient knowledge of HBOC increased significantly post-genetic counseling compared to pre-genetic counseling, the gap in patient knowledge based on education level remained post-genetic counseling. Providers may consider this during genetic counseling sessions and incorporate strategies to ensure comprehensive of information provided.

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REFERENCES