Save The Woman Not The Breasts!

In women between the ages of 30 and 45 years who carry the BRCA gene, does elective prophylactic mastectomy surgery reduce their risk of developing breast cancer over their life time?

Figure 1: http://www.flatfriends.org.uk/showyourstrap-vs-showyourscar-7-flat-friends-in-the-sun-photoshoot/

Introduction:

New Zealand is accountable for over 600 deaths per year from breast cancer and is the third most common type of cancer in New Zealand today (Ministry of Health, 2017). Some women have greater chances of developing breast cancer due to having a BRCA1 or BRCA2 mutated gene. This gene increases the likelihood by 45% - 87% of developing breast cancer for women. Women who have this gene can decide to undergo an elective prophylactic mastectomy, also known as a risk-reducing mastectomy, which can decrease the woman's chances of developing breast cancer by 90% (Farrel & Dempsey, 2014).

Evidence & Findings:

Genetic factors result in approximately 5% to 10% of breast cancer cases which can be due to multiple first-degree relatives with breast, or ovarian cancers.

Women who have a positive BRCA gene have a tendency to develop breast cancer at a younger age compared to women who do not have this mutated gene (Mayo Clinic, 2017) and choosing to consider a prophylactic mastectomy is important as the woman needs to understand that the nipple, areola and all possible breast tissue is removed, and they may want to consider breast reconstruction after the surgical procedure (De la Pena-Salcedo, Soto-Miranda, & Lopez-Salguero, 2011). There is a 10% risk of cancer developing after the prophylactic mastectomy within the scar tissue which is a significant decrease of likelihood compared to the 45% - 87% chance the woman had of developing breast cancer with the positive BRCA gene.

Recommendations:

- Genetic counselling should be pursued before and after BRCA gene testing is performed to assist in any psychological distresses.
- If the woman receives a positive BRCA gene result, they should consider elective prophylactic mastectomy surgery. This surgery reduces the chances of breast cancer by 90%.
- Consult with your doctor and health insurance company before deciding to undergo prophylactic mastectomy surgery to determine whether insurance coverage can be used.
- Prophylactic mastectomy surgery could be fully funded for women with a positive BRCA gene. Due to this elective surgery being expensive it can be difficult for women of all socioeconomic groups to cover the costs of this elective surgery.

Conclusion:

Having a positive BRCA gene shows a significantly greater risk of developing breast cancer. Deciding to undergo a prophylactic mastectomy has the ability to reduce the chances of breast cancer by 90% leaving only a 10% chance of developing breast cancer throughout the woman's life. As breast cancer is a global issue and is prevalent in New Zealand, if women are open to thinking about and participating in this surgical option, the mortality rate of breast cancer can and will decrease year upon year.

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References:

De la Pena-Salcedo, J., Soto-Miranda, M., & Lopez-Salguero, J. (2011). Prophylactic Mastectomy: Is it worth it? *PubMed*. Retrieved from: https://www.ncbi.nlm.nih.gov/pubmed/21751064 doi: 10.1007/s00266-011-9769-x.

Farrel, M., & Dempsey, D. (2014). Textbook of Medical-Surgical Nursing (3rd ed.). Sydney, NSW: Australia: Lippincott Williams & Wilkins.

Mayo Clinic. (2017). BRCA Gene Test for Breast and Ovarian Cancer Risk. Retrieved from: https://www.mayoclinic.org/tests-procedures/brca-gene-test/about/pac-20384815

Ministry of Health. (2017). Breast Cancer. Retrieved form: https://www.health.govt.nz/your-health/conditions-and-treatments/diseases-and-illnesses/breast-cancer

By using the PECOT model, the following question was structured in a format that gave me the ability to critically review best evidence relating to appropriate clinical practice which I then have represented in a visual poster 'In women between the ages of 30 and 45 years who carry the BRCA gene, does prophylactic mastectomy surgery reduce their risk of developing breast cancer over their life time?'

PECOT Category	Information relating to question	Explanation
Population:	Women between the ages of 30-45 years of age with a genetic history of breast cancer and have tested positive for the BRCA gene.	Women who have a familial history of breast cancer and of the BRCA gene are often diagnosed with breast cancer at a younger age.
Exposure:	Women having mastectomy surgery for the prevention of developing breast cancer.	I will look at scholarly articles and journals that look at the prevalence the BRCA gene has on breast cancer and studies which have looked at the outcomes of prophylactic mastectomies.
Comparison/Control:	Women who have the BRCA gene and are choosing to undergo prophylactic mastectomy surgery.	To explore if prophylactic mastectomy positively impacts the woman's lives.
Outcome:	Women who have the BRCA gene who have chosen to undergo prophylactic mastectomy surgery and have not developed breast cancer.	As a positive BRCA gene test increases the woman's likelihood of developing breast cancer in their lifetime the outcome I want to find out is whether prophylactic mastectomies have proven to be effective and the women have not developed breast cancer.
Time:	Not Applicable.	Not applicable.

(Schneider, Whitehead, LoBiondo-Wood, & Haber, 2013).

Summary:

I have chosen to present my clinical issue 'having a positive BRCA gene and considering undergoing a prophylactic mastectomy to reduce developing breast cancer over their lifetime' in the form of a poster. I have chosen to present this health issue in poster form as breast cancer is so prevalent and the third most common cancer within New Zealand (Ministry of Health, 2017). I believe it will capture the attention of women and in particular those who have a positive BRCA gene and provide them with information and education around decisions available to them.

As a poster it is a practical way to provide this information in public spaces, medical centres, hospitals and health care environments in a eye catching manner. I believe this poster will reach a wide audience and have our communities better informed regarding the impact the BRCA genes have and how a prophylactic mastectomy surgery can positively impact the lives of the women with this positive gene.

References:

Ministry of Health. (2017). Breast Cancer. Retrieved form: https://www.health.govt.nz/your-health/conditions-and-treatments/diseases-and-illnesses/breast-cancer

Schneider, Z., Whitehead., D., LoBiondo-Wood, G., & Haber, J. (2013). *Nursing and midwifery research methods and appraisal for evidence – based practice* (4th ed.). Sydney, NSW, Australia: Mosby.