

## Breastfeeding and breast cancer: A risk reduction strategy

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### Abstract

Breast cancer, one of the most widespread causes of cancer deaths in women, began once breast cells start to produce out of control.<sup>1</sup> In 2017 breast cancer new diagnosis around 252, 710 are expected in women, and around 40,610 women are expected to die from the disease. The purpose of this review is to discuss that breast-feeding can reduce the risk of breast cancer. In India, we are now witnessing increase numbers of patients being diagnosed with cancer of breast to be in younger age groups (30-40year).<sup>2</sup> Research shows that breastfeeding mothers have a lower risk of pre-menopausal and post-menopausal breast cancer.

Breastfeeding more than the recommended 6 months can provide extra protection too. It limits the risk of hormones like oestrogen and progesterone, which are known to trigger breast cancer. The mother's menstrual cycle is less due to various changes in lactating mother. It comes in contact with the hormones over time and thus prevents the development of cancer cells. Breastfeeding sheds breast tissue, which helps in getting rid of any cell with potential DNA damage in the breasts. Breast cancer reduced by healthy lifestyle choices, like nutritious foods eating, alcohol avoiding as well as smoking also, exercising etc. All these lifestyle factors play an essential character in decreasing breast cancer risk.<sup>3</sup>

American Institute for Cancer Research and WHO recommends breastfeed for at least six months helps to protect the child from cancer. A wide ranging approach that add interventions diagonally several levels and surroundings may be most successful in serving mothers to attain their breastfeeding goals and lowering disparities in breastfeeding and potentially breast cancer occurrence.<sup>4</sup>

**Keywords:** Breast feeding, Breast cancer, Risk reduction.

### Introduction

“Breastfeeding is not always possible for mothers to breast-feed but for those who can, know that breast-feeding can offer protection for mother as well as child also”.<sup>5</sup> Breast cancer affects over 1.5 million worldwide each year and the most frequent cancer among women, according to the World Health Organisation. Breast cancer is also responsible women deaths through the world. In India the estimated number of breast cancer for the year 2010, 2015 and 2020 will be around 90,659; 106,124 and 123,634. According to Indian Council of Medical Research in year 2015 breast cancer is projected to cross the number of 100,000.<sup>6</sup> Breast cancer is a disease in which cancer cells develops from tissues of breast.<sup>7</sup>

### Risk factors for developing breast cancer includes

1. Early age at 1<sup>st</sup>menstruation
2. Fatness
3. Decrease of physical exercise
4. Prior breast cancer history
5. Alcohol
6. HRT during menopause
7. Radiation
8. Having children not at all or late
9. Old age
10. Inherited genes from parents including BRCA1 and BRCA2(05-10%).<sup>8</sup>

So, risk factor awareness, sign and symptoms and need for screening are important ways of decreasing the risk. Encouragingly, the death rate from breast cancer has reduced a bit in recent years, perhaps due to greater awareness and screening for breast cancer, and through the better treatments. A study suggest that breast cancer risk can

be reduced if she breast-feeds her children.<sup>9</sup> Mothers must be encouraged to breastfeed their babies because the various components of human milk secretion make it an ideal source for babies and provides all energy and nutrients to the baby during his/her time of developing.<sup>4</sup>

### Breastfeeding and Risk Reduction of Breast Cancer

Breast cancers can be beginning from several segments of the breast.<sup>1</sup> Breast tissue includes principally fat, glandular tissue, ducts and connective tissue. Breast tissue builds up in response to hormones such as oestrogens, progesterone, growth factors and insulin. These hormones are responsible for breast cancer and increase the risk of proliferation of cell and mainly affect development period during adolescence, gestation and lactation.<sup>10</sup> Some literature links between breastfeeding to reduced breast cancer risk is increasing.<sup>5</sup> Breast milk is a vital source of nourishment for new-born and young infants. A cooperative group study on Factors of hormone in Breast Cancer, in which investigators found that women who breastfeed every 12<sup>th</sup> month, her breast cancer risk reduced by 4.3%. Studies show that the mothers who breastfed to those infants they have low risk of breast cancer.<sup>4</sup>

### Benefits of Breast Milk

1. Breast milk comprises antibodies that help fight against bacteria and viruses.
2. Breastfeeding reduces risk of babies having allergies and asthma.
3. Mothers who breastfeed exclusively for 6 months have low infection of ear, respiratory problems and diarrhoea.

4. Breastfeeding also help to ovarian cancer risk reduction.<sup>11</sup>

Breast cancer is rise in both developing or develop country and in India breast cancer is above 40 year age but in developed countries it is higher and above the age of 50 year.<sup>12</sup>

There are some reproductive factors which help in increase the risk of breast cancer i.e. early menarche, menopause late, null parity, and absence history of breastfeeding. Several risk factors that are related to lifestyle have also shows that allow to progress of breast cancer, including decreased physical activity, obese, smoking, alcohol use, use of oral contraceptive, hormone replacement therapy, dietary intake decrease, and radiation exposure. 5%–7.2% of breast carcinomas are hereditary shown by families with incidence high breast cancer. In India breast cancer is rising due to urbanization and subsequent lifestyle changes and also rise with age. Breast cancer effectively treated or cured if detected early.<sup>13</sup>

#### **Breastfeeding and Breast Cancer Prevention among Women**

According to research study, breastfed for more than 12 months they had less chance (63%) to get ovarian cancer, who breastfed less than 6-7 months and women those who breastfed for more than thirty-one months and to multiple children could reduce risk of ovarian cancer up to 91.1%, compared to women who breastfeed for less than 10 months. So we can say that it probably a challenge but its benefits go to mother as well as the baby too.<sup>4</sup> As we all know that Breastfeeding is a natural process and it provides all essential contains which require for the baby growth and development.<sup>14</sup> But still the rate of breastfeeding in India remained low by 54.91% during 2015–2016.<sup>15</sup>

#### **Obstacles can make women very difficult to start and continue breastfeeding including**

1. Unaware about breastfeeding knowledge
2. Social norms
3. Poor family and social support
4. Humiliation about public feeding Difficulties in lactation
5. Accessing supportive childcare and returning to work
6. Practices and policies in some health services and care providers
7. Promotion and marketing of infant formula etc.

Breast cancer which is helpful for mutation of BRCA1 or BRCA 2 grows more often in young women. With these genetic mutations, the risk of an increased ovarian cancer is also associated. Approximately 85% of breast cancer is in women who have no family history of cancer of breast. These are due to genetic mutation that results from the aging process and life.<sup>16</sup> In 2018 (U.S.) 266,120 new cases of aggressive breast cancer diagnosed in women will be estimated. Based on the most current data, the survival rate for women suffering from breast cancer is 5%, 10 years and 15 years respectively (91%, 86% and 80% respectively).

Breast cancer is a second leading cause of cancer death in American women and in less developed countries. This review shows that breast feeding can also support in reducing breast cancer risk, cancer of ovary, increase blood pressure, type 2 diabetes. Therefore, families and friends, hospitals, health care offices/clinics, childcare facilities, community-based organizations can play a role in educating the health of families by associating breastfeeding.<sup>17</sup> Currently, the World Health Organization propose that one child breastfeeds for at least two years. "Healthy People 2020" of the US Public Health Service established a national goal of 81.9% of infant's breast feed at birth in six months in 60 months and 34.1% in one year at birth. The target for exclusive breastfeeding is 46.2% and 25.5% in three months six months.

Data released by the Centres for Disease Control and Prevention states that, in 2011, seventy-nine percentage mothers of America started breastfeeding; 49.45% were breastfeeding and 18.81% were particularly breastfeeding in 6 months. "Healthy People 2020", breastfeeding should 81.9% at birth, 60.62% at 6 months, and 34.12% at one year. Exclusive breastfeeding target are 46.2% at 3 months and 25.53% at 6 months. Breastfeeding goals not yet met as by the United States. In 2011, 79.1% of U.S. mothers-initiated breastfeeding; 49.42% were breastfeeding and 18.81% were exclusively breastfeeding at six months; and 26.7% were breastfeeding at twelve months, as Centres for Disease Control and Prevention. While a number of subpopulation approach near to healthy People 2020 start goals of exclusively breastfeed.<sup>18</sup>

#### **Implication for Public Health Practice**

Focus should be to prevention, early detection, diagnosis and treatment, rehabilitation and palliative care. Clinical based examination under research is evaluated as low cost approach to screening of breast cancer that can work in lower large countries. For increasing awareness on breast self-examination is recommending among women at risk rather than as a method of screening. A screening programme is a distance more complex undertaking that an early programme of diagnosis. (WHO, 2007).<sup>19</sup> A study shows that breast cancer Awareness is less in Ethiopia and even among those who are aware of the disease, a sense of helplessness and determinism is common. Breast cancer early signs and symptoms are often ignored and patients frequently first present to traditional healers.<sup>20</sup>

A woman is in need to play various roles as daughter, wife, mother, or mother-in-law based on the reference. To fulfil these roles and responsibilities are severely impacted during the time of treatment (surgery, chemotherapy, and radiation therapy). Due to side effect and treatment the patient has to deal with numerous issues such as deformation of her body, the care ability for her children and intimacy with husband. It leads to disturbance of psychological, around 38% of the cancer patients are identified with depression and anxiety, also to adjustment disorders distress, posttraumatic stress disorder and delirium.<sup>21</sup> The Declaration on the protection, promotion

and support of breastfeeding jointly adopted by WHO and UNICEF in August 1990. Exclusive breastfeeding refers no drinks like water, juices, vitamins, honey, glucose water, gripe, animal or powdered milks or foods other than breast milk is essential first 6 months to the babies. Around 11 lakh babies die during the first month of life around and 5 lakhs during 2 to 12 months of age, in India.

The mortality of Neonates accounts for almost 60% of infant deaths and 40% of all under-five. Only 46% of the Indian infants between 0 and 6 months are exclusively breastfed as per national family health survey-3. Hence following study was done to know the breastfeeding practice in mothers of rural area in central India.<sup>22</sup> India has not yet achieved universal infant and child feeding practices as recommended by the Infant and Young Child Feeding guidelines of the World Health Organization (WHO). Only 24.5% Indian children initiate breastfeeding within 1 hour and 46.4% get exclusive breastfeeding for 6 months.<sup>23</sup> Still breastfeeding in public is an issue. Regardless of the clear breastfeeding benefits, still many women face challenges and one of them is being able to feed their infants any where any time. Due to poor government policies, limited contributing factors of formula marketing, aggressive and support factors. To exclusive breastfeeding the social and economic barriers in less-income countries have been evaluated with traditional practices, gender inequality, social influence and traditional usage shown to prevent feeding practices.<sup>24</sup>

### Issues and Current Trends of Breast Cancer

#### There are some major trends and issues that affected cancer patients in 2018:

1. Shortage of chemotherapy
2. Prescription of anti-cancer agent
3. Concern over cancer
4. Diagnostics focus
5. Payment for genetic cancer and quality test
6. Tumor agnostic prescription of cancer medications
7. Patient outcomes report and artificial intelligence.

### Conclusion

Breastfeeding is become best way to protect us from breast cancer. Intervention of breast cancer like counselling of peer, appointments of breastfeeding-specific clinic, changes hospital policy, breastfeeding enhanced programs and team prenatal education etc. Through these we have to reduce the risk of breast cancer. Around 60% Japan, North America and below 40% low-income countries breast cancer survival rate greatly globally. The survival rate less in develop countries can be defined by shortage of early detection programmes, also shortage of accurate diagnosis and facilities of treatment.

**Conflict of Interest:** None.

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<p><b>How to cite this article:</b> Jelly P, Choudhary S. Breastfeeding and breast cancer: A risk reduction strategy. <i>Int J Med Paediatr Oncol</i> 2019;5(2):47-50.</p>
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