25TH NATIONAL
& 11TH INTERNATIONAL ANNUAL CONGRESS
ON RESEARCH AND TECHNOLOGY OF IRANIAN MEDICAL SCIENCES STUDENTS
URMIA UNIVERSITY OF MEDICAL SCIENCES, URMIA, IRAN

Fertility Preservation in Young Women With Breast Cancer: A Systematic Review

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ABSTRACT

Introduction: Breast cancer (BC) represents the predominant malignancy among women of reproductive age, with approximately 6% of cases occurring in individuals under 40 years old. Young women diagnosed with BC often undergo aggressive therapeutic interventions, including cytotoxic chemotherapy or prolonged endocrine therapy spanning a decade, leading to transient or enduring menopausal symptoms. Consequently, survivors of BC exhibit notably reduced fertility rates post-treatment, with a 70% decrease compared to survivors of other malignancies. Hence, the discussion and implementation of fertility preservation measures emerge as pivotal considerations before initiating therapeutic regimens in young BC patients. There is a paucity of literature addressing the knowledge, practices, and attitudes of physicians in developing nations regarding these pertinent issues. Our objective was to scrutinize the landscape of fertility preservation in young women confronting BC.

Search Strategy: A comprehensive systematic quest of pertinent studies up to 2024 was undertaken by exploring databases such as PubMed, Medline, Scopus, and Google Scholar. This investigation was carried out using the principles outlined in the PRISMA.

Results: The optimal approach to fertility preservation necessitates tailored deliberations involving the patient and healthcare providers and a thorough evaluation of the advantages and drawbacks of various options. Oocyte/embryo cryopreservation emerged as the predominant modality for fertility preservation, succeeded by transient ovarian suppression utilizing gonadotropin-releasing hormone agonists (GnRHa) during chemotherapy and a combination of GnRHa and oocyte/embryo cryopreservation. Research indicateed that younger age, higher educational attainment, employment status, possession of private health insurance, and parity status correlated with a significantly heightened propensity for fertility preservation. Primary reasons for declining fertility preservation consultations encompassed satisfaction with current offspring numbers, financial impediments, and apprehensions regarding treatment delays and cancer recurrence.

Conclusion and Discussion: A substantial proportion of young women newly diagnosed with BC harbor apprehensions concerning fertility matters, which substantially influence their therapeutic decisions. Therefore, safeguarding ovarian function and fertility emerges as paramount for young BC cohorts. Providing comprehensive counseling on fertility preservation strategies is thus imperative for these patients and should be integrally embedded within standard clinical practice.

Citation:
Karimi F, Mehrabinia M. Fertility Preservation in Young Women With Breast Cancer: A Systematic Review. *Iranian biomedical journal*. Supplementary (12-2024): 170.

Keywords: Breast neoplasms, Fertility, Women

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[DOI: 10.61186/ibj.25th-11th-IACRTIMSS]