

Relevance of fertility preservation in developing nations

Fertility preservation helps to prolong the reproductive lifespan of women wanting to delay childbearing and patients going through gonadotoxic treatments, by cryopreservation of their gametes. In the developing world, “social freezing” to delay motherhood is increasing in tandem with the rising professional and economic aspirations of the educated women. Oncofertility on the other hand is slow to gain acceptance both with the oncologists and patients. Survivorship is the priority, and precious financial resources are used for cancer treatment. There is also a male bias to treatment in many developing countries—India being one of them. Social worker Tara Ali Baig says, “In any home, where financial compromises are to be made, it’s the women who are compromised against. They are the first ones to be axed in any crisis situation.” Though relevant to both sexes, fertility preservation unfortunately is required more often in females as aging adds to the cytotoxic insult on the ovaries.

Should we be talking about oncofertility at all in nations where poverty is yet to be eradicated, where medical facilities are not universally available, and where there is a struggle for survival itself. Paradoxically, motherhood defines womanhood in these societies. A childless woman is ostracized and is more than likely to be abandoned by the husband. If unmarried, she is unlikely to find a partner if it becomes known that she could be subfertile. Motherhood is essential to society’s survival; the relevance of fertility preservation therefore is immeasurable.

Let us look at some Indian figures – The National Cancer Registry of India indicates that the annual number of patients who develop cancer in India is set to rise from around 14 lakhs in 2016 to over 17.3 lakhs by 2020. In 2011, nearly 1,193,000 new cancer cases were estimated with a higher load among females (603,500) than males (589,800). In women, cancer of the reproductive organs is more frequent, the most common being breast cancer with an estimated 1.5 lakh (over 10% of all cancers) new cases during 2016. Approximately 40%–80% of females and 30%–50% of males face possible infertility as a result of their cancer treatments – chemotherapy, radiation, and surgery. Women with breast cancer are at a high risk of treatment-related infertility. Gonadal failure resulting from cancer treatments may also affect pubertal development,

hormone production, and sexual function in adults, adding to reproductive problems.

India prides itself on being a nation of the young; more than 50% of its population is below the age of 25 and more than 65% below the age of 35. By 2020, the average age in India will be 29 and it is set to become the world’s youngest country with 64% of its population in the working age group. It has been estimated that more than 140,000 cancer patients are diagnosed in their reproductive years, i.e., up to the age of 45 years and childhood cancer too seems to be increasing. These figures too are going to multiply in line with the increasing young. Programs for early detection of cancer and improved cancer therapy have led to an increase in survival rates, especially in childhood cancers. With improved multimodality treatments, more than 80% of children and adolescents with cancer become long-term survivors. What is the future reproductive potential of these young and women? If they do conceive, what is the chance of cancer recurrence or the well-being of the child? For most cancers, fecundity rate post-treatment does decrease. Fertility preservation and assisted reproductive technology have helped to improve chances of conception among these couples. Fortunately, current data suggest that for most tumors post-treatment pregnancy does not increase the risk of cancer progression or obstetric or neonatal outcome. The emphasis in oncology has therefore moved from providing life to providing “quality of life.” These figures indicate that fertility preservation has immense relevance in developing nations, but there is a need for awareness in the community and financial support from the government. It is also incumbent on oncologists to discuss the possibility of infertility and on reproductive physicians to advise on fertility preservation, without bias.

The Onco Fertility Journal aims to address issues on fertility and fertility preservation with a special emphasis on the Asian population. In this first issue, we have review article on topics which range from basics to newer techniques in this area. Psychological needs of oncological patients, an aspect that often takes a backseat, have been reviewed comprehensively. The importance of fertility preservation in young breast cancer patients can never be overemphasized and has been covered in detail. Ovarian tissue cryopreservation and transplantation, a recent

much-debated technique of fertility preservation, has lost the “experimental” tag in Israel and Europe since almost a hundred births have been reported using this technique. The review article by Prof. Nao Suzuki, a pioneer in the technique of ovarian tissue vitrification, looks at the risks and benefits of the procedure. Oncofertility in males is addressed in a detailed review looking at indications and techniques. The International Society for Fertility Preservation recommends semen preservation irrespective of the gonadotoxic impact of chemotherapy. A case series on endometrial and ovarian cancer gives an insight into the fertility preservation in gynecological cancers. Conservative therapy for endometrial cancer is advocated in early cancers, highlighting the importance of proper oncological follow-up. To address the issue of improving ovarian response in patients with low ovarian reserve—common in cancer survivors—a randomized controlled trial on the use of growth hormone in poor ovarian reserve is included. Another original article deals with the inadequately studied luteal phase. I hope the reader finds these articles interesting and informative.

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