

IORT: Possible change in early breast cancer management?Muhammad Asad Khan,¹ Muhammad Haseeb Zubair,² Faizan Nihal³

Madam, breast cancer is the leading cause of death in women due to cancer, especially in the age group of 45-49 years. In Pakistan, the most frequently diagnosed cancer in females is the breast cancer (1 out of 5 women).¹ Special attention has been given to the management of breast cancer which accounts for the evolution of its treatment. From previously preferred radical mastectomies, breast cancer management now encompasses attempts at preservation of breast and axillary lymph nodes.

Alternative techniques have provided the same level of control on the neoplastic tissues with the added benefit of being cosmetically unaffected. One such concept in radiotherapy is partial breast irradiation as it reduces the surface area of unaffected tissue which is exposed to the radiation and alters the duration of the treatment. This further aids in increasing patient compliance.

It is safe to say, based on the following study, that intra beam intraoperative radiation therapy (IORT) is a relatively safe, cost-efficient and cosmetically preferable treatment option compared to whole breast extra beam radiotherapy. The IORT has been observed to be effective for patients over the age of 45 years except for patients having more than one tumor within the breast. It involves emission of 50kV x-rays to the lumpectomy craters intraoperatively.

TARGIT-A: A trial was carried out which included women, aged 45 years or older, presenting with early breast cancer. They were suitable candidates for wide local excision for invasive ductal carcinoma which were unifocal on examination and imaging (excluding MRI confirmation). The primary outcome measure of the trial

included local recurrence rate, while the secondary outcomes included safety, cosmesis, cost-effectiveness and patient satisfaction.² Even though the TARGIT-A group is safer due to its lower Radiation Therapy Oncology Group (RTOG) grade 3 toxicity, it still had more occurrence of significant seromas.³ IORT has shown to be a cosmetically better option⁴ and has been the subject of future randomized trials.⁵

About 21% of the North American women failed to comply with the radiation therapy recommended due to the cost and inconvenience.⁶ Decreased cost and improved quality of postoperative life years in patients with IORT rather than external beam radiotherapy (EBRT) stands to be a better and effective treatment option. Although IORT is in its early phase, it is a promising step in conservatively managing early invasive breast cancer.

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