



Adjuvant treatments to prevent local recurrence after breast-conserving surgery for early breast cancer

– radiation-, endocrine- or brachytherapy

av

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Abstract

Åsa Wickberg (2018): Adjuvant treatments to prevent local recurrence after breast-conserving surgery for early breast cancer – radiation, endocrine- or brachytherapy. Örebro studies in Medicine 181.

Radiotherapy after breast-conserving surgery due to breast cancer is an established treatment, known to reduce the incidence of recurrence and even death from the disease. However some women are over-treated with sometimes serious adverse effects. De-escalating the treatment and find alternative adjuvant methods are becoming an important issue.

In study I, we present the outcomes from a long-term follow-up trial randomising 381 women with breast cancer to surgery alone or to surgery with the addition of radiotherapy. The incidence of any first breast cancer event was significantly higher without radiotherapy but the protecting effect lasted for only the first five years.

In study II, we collected the tissue samples from the tumours in study I to construct tissue micro-arrays. Immuno-histochemical analyses were performed and the tumours were classified into the intrinsic subtypes. The luminal B/HER2 negative subtype was found to be prognostic for ipsilateral breast cancer recurrence (IBTR). The intrinsic subtypes did not interact with radiotherapy.

Study III was a multicentre prospective cohort study where the 601 study participants with early breast cancer were treated with surgery and endocrine therapy alone without postoperative radiotherapy. The cumulative incidence of IBTR after five years was low -1.2% and only one woman died of breast cancer.

In study IV we evaluated the feasibility and treatment complications when introducing a new method for intraoperative brachytherapy (IOBT) using HDR equipment. We designed a pilot study including fifty women where half of them were treated during primary surgery and the others during a second procedure. The treatment was well tolerated and no logistic problems were reported. No acute adverse effects from IOBT were seen.

Keywords: breast-conserving surgery, radiotherapy, endocrine therapy, intraoperative brachytherapy

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