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## Periareolar Zigzag Incision in the Conservative Surgical Treatment of Breast Cancer

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Abstract: Background: Breast conserving surgery (BCS) followed by radiation therapy is today standard therapy for early breast cancer. It is safe therapeutic procedure in early breast cancers, because it provides the same level of overall survival as mastectomy. There are a number of different types of incisions used to BCS. Avoiding scars on the breast is women's desire. Numerous minimal approaches have evolved due to this concern. Periareolar incision is often used when the small tumor relatively close to the nipple. But periareolar incision has a disadvantages include limited exposure of the surgical field. In plastic surgery, various methods such as zigzag incisions have been recommended to achieve satisfactory esthetic results. Periareolar zigzag incision has the advantage of not only good surgical field but also contributed to better surgical scars. The purpose of this study was to evaluate the oncological safety of procedures by studying the status of the surgical margins of the excised tumor specimen and reduces the need for further surgery. Methods: Between January 2016 and September 2016, 148 women with breast cancer underwent BCS or mastectomy by the same surgeon in ASAN medical center. Patients with exclusion criteria were excluded from this study if they had a bilateral breast cancer or underwent resection of the other tumors or taken axillary dissection or performed other incision methods. Periareolar zigzag incision was performed and excision margins of the specimen were identified frozen sections and paraffin-embedded or permanent sections in all patients in this study. We retrospectively analyzed tumor characteristics, the operative time, size of specimen, the distance from the tumor to nipple. Results: A total of 148 patients were reviewed, 72 included in the final analysis, 76 excluded. The mean age of the patients was 52.6 (range 25-19 years), median tumor size was 1.6 cm (range, 0.2-8.8), median tumor distance from the nipple was 4.0 cm (range, 1.0-9.0), median excised specimen sized was 5.1 cm (range, 2.8-15.0), median operation time was 70.0 minute (range, 39-138). All patients were discharged with no sign of infection or skin necrosis. Free resection margin was confirmed by frozen biopsy and permanent biopsy in all samples. There were no patients underwent reoperation. Conclusions: We suggest that periareolar zigzag incision can provide a good surgical field to remove a relatively large tumor and may provide cosmetically good outcomes.

Keywords: periareolar zigzag incision, breast conserving surgery, breast cancer, resection margin

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