

treated with breast conservation was 7 mm. One patient had mastectomy after neo-adjuvant chemotherapy. No patient required a second operation.

Conclusions: Clips detectable by ultrasound can simplify surgical treatment in breast conserving surgery for breast cancer. The clips may be inserted during the initial percutaneous breast biopsy or under anesthesia during sentinel lymph node biopsy prior to neo-adjuvant treatment. Pre-operative localization can then be omitted. Hydromark clips are detectable by mammography, are MRI compatible and remained easily visible on ultrasound six months after insertion in our patients. Surgical margins were adequate. Further investigation should focus on comparing this technique with standard pre-operative localization.

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Factors Other Than Margin Status Predict for Recurrence in Borderline and Malignant Phyllodes Tumours

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Background: Borderline and malignant phyllodes tumours (PTs) have the potential for disseminated disease. Surgical resection with adequate margins is therefore advocated. However, there is no consensus as to what constitutes an adequate margin, and furthermore, recurrence and disseminated disease may still occur despite apparently complete resection. In this study, we aim to review the outcome of surgical resection of borderline and malignant PTs, as well as to identify factors that may predict for recurrence.

Material and Methods: Retrospective review was performed of 56 patients diagnosed with borderline and malignant PTs at our institute from 1st January 2000 to 10th October 2011. All patients, except 1 with a malignant PT, underwent surgical resection. A margin of 1 mm was considered adequate. Primary endpoints evaluated included local and distant recurrence.

Results: Of the 56 patients, 38 had borderline PTs and 18 had malignant PTs. There was no significant difference in the age at presentation. Median tumour size in those with borderline PTs was 50 mm (15–215 mm), and was 65 mm (25–250 mm) in those with malignant PTs. Of those with borderline PTs, 24 patients underwent excision biopsy, 6 wide local excision (WLE) and 8 a simple mastectomy; 10 patients underwent further surgery for inadequate margins. Final surgical margins were considered inadequate in 20 patients, but only 2 of these developed local recurrence. Two other patients who developed local recurrence had adequate margins. None developed disseminated disease over a median follow-up of 21 months (1–144 months). In those with malignant PT, 8 patients underwent excision biopsy, 3 WLE and 6 mastectomy. Eight patients underwent a second surgery. Final surgical margins remained inadequate in 4 patients (all had undergone mastectomy). One of these received post-operative chest wall irradiation, but developed recurrent disease (both local and disseminated) after completion. Of the remaining 3 patients, 1 further patient developed recurrent disease and 2 others defaulted follow-up. Among those with adequate margins, 3 patients developed recurrent disease, which was disseminated in 2. Two patients died from disseminated disease.

Older patients were more likely to develop recurrent disease ($P = 0.02$). A malignant histology ($P = 0.04$, OR 5.26, 95% CI 0.04–0.89) and high mitotic count ($P = 0.01$, OR 7.30, 95% CI 0.02–0.76) correlated significantly with the likelihood of recurrence. Although larger tumours were more likely to recur, this did not reach statistical significance. Margin status did not correlate with recurrence.

Conclusions: Recurrence following surgical resection with a 1 mm margin was 10.5% for borderline PTs and 27.8% for malignant PTs. Surgical margin status did not correlate with recurrence. Rather, age, malignancy and the degree of mitotic activity appeared to predict for recurrent disease.

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Harmonic Scalpel Vs. Electrocautery Dissection in Modified Radical Mastectomy – Randomized Controlled Trial

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Background: To compare outcomes between harmonic and Electrocautery dissection in female adult patients who underwent modified radical mastectomy (MRM).

Methods: In this randomized controlled trial, the adult females who underwent MRM during 1st april 2010 to 30th may 2011 were randomized to receive either intervention A (harmonic scalpel) or B (electrocautery) by lottery method. The procedure was standardized except raising of the flaps that was performed as per randomization. Two drains were placed i.e. one in axilla and other in flap. Patients were followed up in clinic for four weeks. The outcomes were estimated blood loss (EBL), operating time, drain Volume and drain Days, seroma formation, surgical

site infection and postoperative pain. Comparison of groups was done with T-test for continuous and chi-square for categorical variables. Multiple linear regression was done to control the effect of age, BMI, breast volume, tumor size and neoadjuvant chemo radiotherapy.

Results: In each intervention group, 75 patients were recruited consecutively. Both the groups were comparable for baseline variables with age of 48.5 ± 14.5 and 50.5 ± 12.2 years, respectively. Harmonic dissection yielded better outcomes as compared to electrocautery with lower EBL (182 ± 92 vs. 100 ± 62 , p-value: 0.00), operative time (187 ± 36 vs. 191 ± 44 , p-value: 0.49), drain volume (1035 ± 413 vs. 631 ± 275 , p-value: 0.00), drain days (17 ± 4 vs. 12 ± 3 p-value: 0.00), seroma formation (21.3% vs. 33.3%, p-value: 0.071), surgical site infection (5.3% vs. 23%, p-value: 0.006) and postoperative pain (3.4 ± 1 vs. 1.8 ± 0.6 , p-value: 0.00).

Conclusion: Although the harmonic didn't reduce the operative time, however, it significantly reduced post operative discomfort and morbidity to the patient. Based on our results we recommend harmonic dissection in MRM.

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Why Some Surgeons Omit Sentinel Node Biopsy in Breast Cancer Patients? Barriers to Popularize Sentinel Node Biopsy in Low Resource Areas

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Background: Sentinel node biopsy (SLNB) is now standard of care in early breast cancer, but there are still some limitations for surgeons in low resource areas like some areas in Iran, to do this beneficial method for their patients. Popularizing a new technique like SLNB is the matter that is as important as standardizing it and may be more difficult than it. If we know the reasons for omission of SLNB by surgeons, we can find the ways to encourage them to do it routinely and prevent unwanted side effects of axillary dissection.

Materials and Methods: 105 General and breast surgeons of IRAN participating in CME programs answered questionnaire about if they do sentinel node biopsy for their patients when it is indicated and cause of omission if the answer was not. Surgeons also answered questions about their place of work and percent of their work that was related to breast and how they learned sentinel node biopsy.

Results: 65.75% of the surgeons said that they do not perform sentinel node biopsy routinely for their patients with early breast cancer. This rate was 55% for the surgeons that more than 30% of their surgeries were on breast cancer. Overall the cause of omitting SLNB was lack of facilities such as radioactive injection and detection probe (72.4%), lack of trustable pathologist for sentinel node assessment (6.8%) and Difficulty in discussion for the patients because of unawareness and fear of losing the patient's trust (3.6%). Also 17.2% of surgeons said that they are not educated for sentinel node biopsy or haven't passed the learning curve besides not access to equipments.

Conclusion: Even in present time that sentinel node biopsy is a known standard of care for early breast cancer, some surgeons omit it mainly because of insufficient facilities. If we could offer a low cost method for SLNB in district areas that do not have access to radio labeled drugs or detection probes, it can be done for most breast cancer patients that have tumors with clinical negative lymph nodes.

The low cost method may be using only dye for injection as some researchers reported it with good results (like experience of surgeons in Brigham and Women's Hospital in Boston). Education of pathologists and surgeons and raising awareness of the patients are also helpful to popularize this method.

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Minimally Invasive Nipple Sparing Mastectomy – One Year Monoinstitutional Experience of a Novel Technique

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Background: Minimally invasive breast surgery is in its infancy, since early reports from Oriental countries failed until now to find out a safe and reproducible procedure. We propose a new video-assisted nipple sparing mastectomy technique (V-NSM) aiming to avoid breast's scars