

Low rate of positive margins and reexcision after partial mastectomy in highly selective breast cancer patients:a Chinese single-institution experience

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BACKGROUND: Recently a randomised,controlled clinical trial has firstly demonstrated that cavity shaving significantly decreases the rate of positive margins and re-excision among patients with partial mastectomy(PM).However, it remained unknown whether there was and how to identify a highly-selective group of PM patients to perform cavity shaving in the preoperative setting,which our study aimed to figure out by introducing a Chinese single-institution experience.

HYPOTHESIS: Taking a low PM rate as well as local-regional recurrence rate into account in our center,cavity shaving should not be routinely performed in every PM patient. The PM patients with preoperative mammographic calcifications were more likely to have positive margins postoperatively in our center,indicating that this specific target population might benefit more from cavity shaving during PM.

METHODS: A total of 408 PM patients among all 1796 surgically-treated breast cancer patients from Jan,2015 to Jun,2015 in Fudan University Shanghai Cancer Center were included in this retrospective study.Data were analysed with univariate and multivariate analysis involving age,preoperative mammographic calcifications, tumor size, histological tumor size,estrogen receptor, human epidermal growth factor receptor-2,lymph node status and lymphovascular invasion status,respectively. Correspondingly,the survival of 461 patients who were treated with both PM and radiotherapy in our cancer center from April,2008 to Dec,2010 was assessed by Kaplan-Meier method. In our study,margins were deemed positive if tumor touching the edge or within 1 mm of the edge of the specimen was found in the case of invasive cancer and ductal carcinoma in situ(DCIS), respectively.

RESULTS: With a PM rate of 22.7%(408/1796),two patients underwent bilateral partial mastectomy among 408 incorporated patients and only 2.7% of the cases presented with positive margins postoperatively. In the multivariate logistic regression analysis,mammographic calcifications (yes or no) was significantly associated with margin positivity after PM($P<0.05$,HR=4.8,95%CI:1.7-19.5).Moreover, the 5-year local-regional recurrence survival of 461 patients undergoing PM along with radiotherapy from April,2008 to Dec,2010 in ours was 97.7% with a median follow-up time of 5.2 years.