

The utilization of ultrasound-guided

Encor™ biopsy system for benign breast disease

Wen-ping Li, Zhong-yang Chen, Juan Xu, An-qin Zhang, Xiao-rong Han, Cai-xia Zhu, Jian-min Yang, Zhen-qiang Lian, Yong-nan Wang and Qi Wang

Breast Disease Center, Guangdong Women and Children Hospital of Guangzhou Medical College, Guangzhou 510010, PR China

Correspondence: Dr Qi Wang, E-mail: wangqigz@21cn.com

PURPOSE: To evaluate the ultrasound-guided vacuum-assisted Encor™ breast biopsy system for complete eradication of presumed benign breast lesions and the diagnosis of suspicious breast lesions. **METHODS:** A retrospective analysis was conducted of 327 consecutive patients (16-70 years, median age, 37 years) with Encor™ system biopsy under ultrasound guidance from March 2009 to October 2009. Patients were performed with 7-gauge (tissue quality 250mg – 300mg, 319 cases) and 10-gauge (tissue quality 100-115mg, 8 cases) vacuum-assisted Encor™ probe under local anaesthetic. Before biopsy, all patients's ultrasound examination result were classified according to the Breast Imaging Reporting and Data System (BI-RADS). Histopathology and follow-up based on ultrasound were evaluated. **Results:** There were 327 patients including 138 cases with one lesion and 189 cases with multiple lesions. In addition, 101 cases with impalpable lesions. The median number of lesions for one patient was 2 (range 1- 18), the median lesion size was 1.2 cm (range 0.3-4.0 cm). 144 cases were classified as BI-RADS 2, 141 cases were classified as BI-RADS 3 and 42 cases were classified as BI-RADS 4a. 257 (78.6%) cases were diagnosed as fibroadenoma, 13 (4.0%) cases as cyst, 9 (2.8%) cases as intraductal papilloma, 20 (6.1%) cases as breast adenosis, 6 (1.8%) cases as mammary duct ectasia, 6 (1.8%) cases as atypical ductal hyperplasia, 2 (0.6%) cases as other benign disease, 12 (3.7%) cases as invasive breast cancer and 2 (0.6%) cases as ductal carcinoma in situ. The 14 malignant diseases were all BI-RADS 3 or 4a and was 4.28% of all. No serious complications of the biopsies were observed except skin ecchymosis and post-procedure haematoma, which did not require treatment. The outlook of all patients were satisfactory. There no residual lesion for the 14 breast cancer cases in subsequently modified radical mastectomy. To date, no patient were found recurrence with ultrasound during a median 4 months follow-up. **CONCLUSION:** The vacuum-assisted Encor™ system is a safe and useful diagnostic method, which is highly successful for complete excision of benign breast lesions and highly accurate for ultrasound-guided diagnostic biopsy of suspicious breast lesions, and which consequently decline the risk of missing of early breast cancer, avoid underestimate of breast disease. Encor™ system is a satisfactory alternative to surgery for the majority of patients, but particular attention should be paid to ensuring complete lesion removal to reduce recurrence.