Use of ultrasound-guided percutaneous vacuum-assisted breast biopsy for selected difficult indications.

Abstract:

To assess ultrasound-guided vacuum-assisted biopsy (US-VAB) for selected problem cases and to report experiences with two different biopsy systems. Fifty-one lesions have been biopsied using the Mammotome (n = 24) or the Vacora (n = 27) system. Main indications: lesion in scarring (n = 5), complex cystic or ≥8 mm (n = 7), increase in size (n = 10), architectural distortion (n = 4), uncharacteristic palpable abnormality (2), small size (n = 22), regional microcalcifications (n = 1). Results are verified by surgical excision (n = 10) or follow-up (n = 40). One patient was lost to follow-up. In four of the cases preceding core biopsy was inconclusive. Four invasive carcinomas, two ductal carcinoma in situ (DCIS), three papillomas, six fibroadenomas, one adenosis tumor, one hamartoma, 10 complex cysts, 16 benign changes, three fat necroses, two granulomas, three unspecific inflammatory changes are verified. Surgery confirmed five malignancies, four benign changes, and converted one uncertain diagnosis (architectural distortion) from "inflammatory" to DCIS. Documented removal of all or most of the lesions correctly increased the level of confidence and open surgery could be avoided in 41/51 lesions. The two systems show different advantages and drawbacks. US-VAB may improve the level of confidence in selected difficult cases. Careful case selection and systematic retrospective correlation of imaging and histology remain crucial.