

More indications for Ultrasound guided Vacuum Assisted Biopsy (US-VAB) in breast tumours

- This technique removes basically the same amount of tumour without going into surgery
- Lesions such as fibroadenomas and other types of breast benign tumours are located and eliminated in real time
- Benefits for the patients are numerous: it leaves no scar, it does not require hospitalization, and patients can resume their normal lives shortly after the procedure
- The radiologist is the best qualified professional to perform it

Madrid, January the 30th, 2017. Ultrasound guided Vacuum Assisted Biopsy (US-VAB) is a non-surgical procedure which combines biopsy and ultrasound imaging. Its main benefit is that the amount of benign or malignant tumour it removes in order to confirm the diagnosis is similar to the amount removed with conventional surgery. It also makes it possible to resect certain types of benign tumours without having to go into surgery.

“This procedure can even remove lesions from the breast through a small incision of about two or three millimetres with no need for open surgery. Ultrasound imaging has the advantage that the lesion is seen and the biopsy is monitored in real time, which makes it a more precise procedure compared to other radiological techniques or even compared to surgery,” points out Dr. Mercedes Torres-Tabanera, coordinator of the Unit for Women’s Radiological Imaging at Hospital HM Puerta del Sur, Móstoles, Madrid, Spain.

Numerous benefits for the patients

Benefits for the patients are numerous. As detailed by this expert, “ultrasound guidance is much more convenient for the women than other types of guidance, such as stereotaxy or magnetic resonance, and biopsies can be performed on lesions located anywhere in the breast. It is an out-patient procedure performed under local anaesthesia. It does not require either hospital admission or the usual pre-surgery tests. The incision leaves no scar and recovery is very fast, so the patient’s downtime, also an important factor, is much shorter: most women resume their usual activities in 48 hours.”

Vacuum assisted biopsy is performed using a special needle which applies vacuum and removes a fragment of the lesion in a biopsy chamber –located inside the needle. By means of a rotating scalpel blade, fragments are cut out of the lesion and subsequently aspirated. Dr. Torres-Tabanera emphasizes that “the lesion is removed by ‘aspiration’ of small fragments so that, once the needle has been introduced in the breast, we do not need to take it out and reinsert it, and just one insertion suffices to remove the whole lesion. This means an additional benefit for the patient as it is much less aggressive than a conventional biopsy”.

This type of biopsy was first used in 1995 under stereotactic guidance and for very specific lesions such as microcalcifications. “Ever since I started using it in 1999, more indications have been approved: there has been a considerable technical development, and now it is much easier to apply for the radiologist, and more convenient for the patient. But, in spite of the increase in indications, many of the doctors that prescribe surgical biopsies or particular treatments for breast lesions are unaware that this procedure is available and can be used. Women do not know it either,” explains this radiologist.

Cost-effectiveness has been proved¹, and this procedure is currently approved for the resection of breast fibroadenomas and other types of benign breast lesions which usually are removed in the operating room. It is also useful when results of conventional biopsies are unclear and do not permit to conclude if the lesion is or is not malignant. With US-VAB, these patients may avoid going into surgery if the lesion is confirmed to be benign, or in the event of cancer, treatment planning can be made easier. As it is a procedure performed under image guiding, the radiologist is the best qualified professional to apply it.

More options for the future

“Medicine is under constant development, and if we add technical improvements –especially with regards to imaging, as we will move from 2D to 3D ultrasound images– we as radiologists are required to keep abreast of these developments: thanks to them we treat without using radiation and in real time,” insists Dr. Sofiane Derrouis, a radiologist at the Neuchatel’s Institute of Radiology (Switzerland).

Dr. Torres-Tabanera foresees future applications “in the treatment of selected cases of breast cancer. To treat benign lesions, our only restriction is size: the current limit is five centimetres; bigger lesions require conventional surgery.” And the Swiss expert adds that “besides biopsies, it may be applied to treat certain kinds of cancer in combination with cryotherapy or radiofrequency.”

The patient’s perspective

Dr. María Fe Lorente is a patient that has undergone a US-VAB procedure. “When I was diagnosed, I was worried because I could feel my lesion, even though I knew it was benign. Dr. Torres removed the lesion transcutaneously, in ten minutes, painlessly, and living no scar,” she explains. And as a radiologist

working at the Hospital Clínico Universitario San Juan, Alicante, Spain, she declares that it is highly important for radiologists to treat instead of just diagnose. “Being an interventional radiologist is very satisfying, as it is being able to remove breast tumours without having to go into surgery and without neither general anaesthesia nor downtime for the patient. This procedure should be performed more often,” she insists.

- 1 Alonso-Bartolomé P. et al. Sonographically Guided 11-G Directional Vacuum-Assisted Breast Biopsy as an Alternative to Surgical Excision: Utility and Cost Study in Probably Benign Lesions. Acta Radiol 2004 (4) doi 10.1080/02841850410005633.

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