https://doi.org/10.29289/259453942025V35S1107

Case report: pseudoaneurysm, an unusual complication after breast biopsy

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Objective: To describe a rare complication after a slightly invasive ultrasound-guided procedure and its pathognomonic finding. **Methods:** This is a review of medical records and images, with chronological record of progress and identification and patient response. **Results:** A female, 61 years old, post-menopausal, hypertensive, asymptomatic, underwent a mammogram, which showed heterogeneous, amorphous, and grouped calcifications in the superolateral quadrant of the left breast, with extension of 1.2 cm. The patient underwent stereotactic-guided mammotomy. A reevaluation was performed on the seventh day, at which she continued complaining of pain and worsening of the hematoma. Ultrasound performed on the eighth day showed nodular vascular formation with flow in a "yin-yang" pattern characteristic of pseudoaneurysm. The literature on pseudoaneurysm after breast biopsies is scarce due to the low incidence of such complication. Data were found from only 23 cases in 22 years of searching. Reported risk factors include advanced age, atherosclerosis, being a woman, and the use of anticoagulant therapy. Pseudoaneurysm manifests clinically as a pulsatile mass at the biopsy site. The first-line diagnostic test is color Doppler ultrasonography, which has an accuracy of 95%. The imaging test shows an internal and turbulent flow exhibiting the typical yin-yang sign. Follow-up of the complication ranges from conservative treatment with ultrasound-guided local compression to intravascular thrombin injection or surgery. **Conclusion:** Pseudoaneurysms contain transmural ruptures that occur when the three layers of the arterial wall are violated, forming a saccular collection. It usually manifests as a pulsatile mass in the breast after some local trauma, or due to biopsies and surgeries. It is a rare complication of core needle biopsies. Patients who present with increased pain and rapid growth of a mass at the tumor site after breast biopsy should be evaluated for possible pseudoaneurysm. Adequate planning of the biopsy site is important, with prior review of imaging tests, thus avoiding injury to vessels close to the tumor.

Keywords: pseudoaneurysm; biopsy; breast cancer.