

# Invasive Papillary Carcinoma of the Breast Presenting as Post-Traumatic Hemorrhagic Cyst

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## Abstract

A case of invasive papillary carcinoma of the breast presenting as post-traumatic hemorrhagic cyst in a 63-year-old patient is presented. A modified radical mastectomy and axillary dissection was performed.

## INTRODUCTION

It is well known that bloody cysts are suspicious and should be closely monitored for risk of intracystic neoplasm<sup>1,2</sup>. However, in patients with history of trauma, the diagnosis of choice for cysts with bloody aspirate and negative cytology is trauma associated hemorrhagic cyst. In this report, we describe a case of intracystic papillary carcinoma that presented as post-traumatic hemorrhagic cyst.

## CASE REPORT

A 63-year-old woman was admitted to our hospital with the chief complaint of a single, soft, palpable mass of nearly 2 cm in diameter at her right breast. Four months earlier, she had fallen down from a ladder and injured her breast. She had not been admitted to any hospital at that time. Medical history was negative for any hematologic disease or bleeding tendency. Mammogram showed a single hyperdense mass with well-defined lateral margin but not well-defined medial margin (Figure.1).

## Figure 1

Figure 1: Right CC mammogram of the patient. It shows a single hyperdense mass with well-defined lateral margin but not well-defined medial margin.



Her routine control mammogram had been reported as normal six months ago. Ultrasonography of the right breast showed a round shaped cyst with echogenic debris and irregular, thickened cyst walls. The radiology department reported it as BIRADS 4b. We decided to perform a surgical excision. The mass was diagnosed as invasive papillary carcinoma. The tumor was 1.4 cm in diameter.

The patient was treated with modified radical mastectomy and axillary dissection, because she did not want a breast-conserving operation. At axillary dissection no metastasis was found among nineteen resected nodes.

## DISCUSSION

Cystic carcinomas of the breast encompass a heterogeneous

spectrum of tumors. These include intracystic papillary carcinoma with or without invasion, ductal carcinoma with cystic degeneration, such as comedo forms of ductal carcinoma in situ, medullary carcinoma, squamous carcinoma, and cystic hypersecretory ductal adenocarcinoma<sup>1,2,3</sup>. The prognosis of high-grade ductal carcinomas with cystic degeneration is poor, while that of intracystic papillary carcinoma is excellent.

Sonography and aspiration biopsy are the first steps in the diagnosis of cystic carcinomas. However, cytological examination alone has high false-negative rates due to sparse cellularity, abundant obscuring blood, necrotic debris, and degenerative changes in the diagnostic cells<sup>4</sup>. Core needle biopsy is a useful diagnostic tool for cystic carcinomas, however, it may be unable to distinguish between in situ and invasive lesions, as the center of the lesion is often targeted but invasion is often identified at the periphery<sup>5</sup>. Ko et al. suggested close follow-up of hemorrhagic cystic masses, regardless of trauma history, and consideration of surgical excisional biopsy for cysts that rapidly grow post-aspiration, even for those with negative cytology.

Considering the patient's age, history and the report of the radiology department we decided to perform an excisional biopsy. Based on our experience irregular, thickened walled

cysts, especially those larger than 2 cm in diameter, if post-traumatic or not, should be removed by surgical excision for exact diagnosis.

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