

## Case Report

# Breast tubular adenoma

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### ABSTRACT

We present a case of a young woman, with no known comorbidities, who presented with bilateral breasts lumps noted 6 months prior to her initial clinic visit. On examination, both breast masses were felt bilaterally. The masses were completely excised, and histopathologic examination confirmed the diagnosis of breast tubular adenoma. This report aimed to present a rare benign breast neoplasm and discuss the challenges in the diagnosis and management of such condition.

**Keywords:** Tubular adenoma, Fibroadenoma, Benign, Breast lump

### INTRODUCTION

Tubular adenoma is a benign neoplasm of epithelial origin arising from the breast accounting for 0.13%-1.7% of all benign breast neoplasms.<sup>1,2</sup>

Tubular adenomas are commonly found in young women and rarely found before menarche or after menopause.<sup>2,3</sup>

Tubular adenomas were first described histologically by Persaus et al in 1968. However, in 1983, Morros et al studied tubular adenomas by cytology and light and electron microscopy, and only few cases were reported in the literature.<sup>4</sup>

It is difficult to diagnose tubular adenoma pre-operatively depending on clinical and radiologic findings as the final diagnosis is only based on the histopathologic findings, which is a small amount of fibrous stroma containing proliferative tubular structures.<sup>1,2</sup>

### CASE REPORT

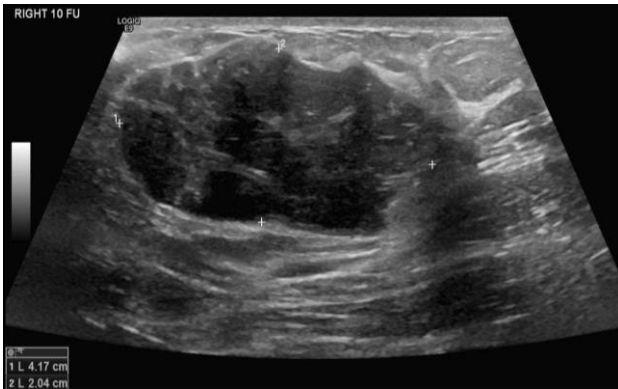
**Patient information:** A 25-year-old woman, with no significant medical and surgical history, presented with

bilateral breasts lumps of 6 months duration. Progressive increase in lump size with no nipple changes or discharge noted by the patient. The patient has strong family history of malignant breast cancer but, no history of contraceptive pill uses or hormonal therapy. She is married and had 1 child, which used to breast fed from her.

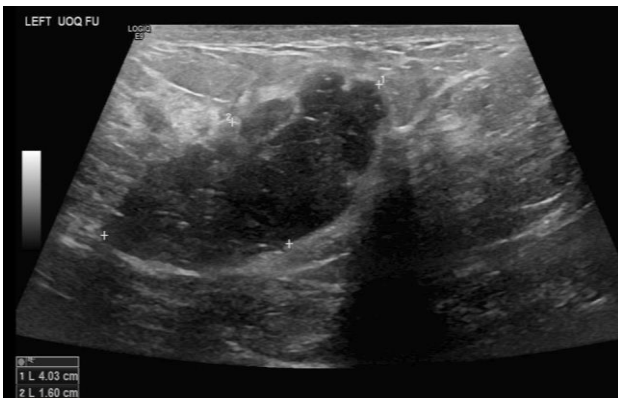
**Clinical findings:** The right breast had a 2×3 cm mass felt on the tail, which was mobile and non-tender with no overlying skin changes or nipple changes and no palpable axillary lymph nodes.

The left breast had a 2×3 cm mass felt at the 12 o'clock position, which was mobile and non-tender with no overlying skin and nipple changes and no palpable axillary lymph nodes.

**Diagnostic assessment:** Bilateral breasts ultrasonography was performed and revealed a large well-defined hypoechoic soft tissue mass at 10 o'clock position, 1.4×0.9 cm in size (BI-RADS 2) (Figure 1), and an oval-shaped hypoechoic lesion at periareolar 1-2 o'clock position 4×2×2.2 cm in size (BI-RADS 3) (Figure 2).



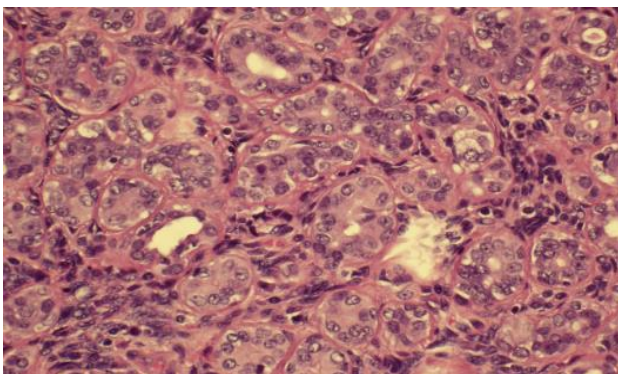
**Figure 1: Large well-defined hypoechoic soft tissue mass (BI-RADS 2).**



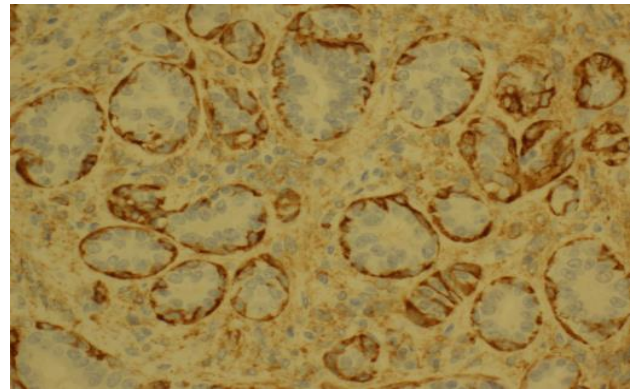
**Figure 2: Oval-shaped hypoechoic lesion (BI-RADS 3).**

**Therapeutic intervention:** The patient underwent excisional biopsy of bilateral breasts masses. The masses were completely excised, well circumscribed and encapsulated.

**Follow up and out comes:** The histopathological examination of excised lesions showed tubules and ducts lined by benign ductal epithelial cells and myoepithelial cells with no evidence of in-situ or invasive malignancy consistent with tubular adenoma (Figure 3).



**Figure 3: Tubules and ducts lined by benign ductal epithelial cells and myoepithelial cells.**



**Figure 4: Positive SMA and p63.**

Immunohistochemical studies showed positive SMA and p63 confirming intact myoepithelial cell layers (Figure 4).

She had regular follow-up and no evidence of recurrence.

## DISCUSSION

There are different types of breast adenomas such as true adenomas, nipple adenomas, and fibroadenomas.<sup>1,3</sup> Tubular adenomas are also known as pure adenomas and considered extremely rare epithelial neoplasms affecting young women at reproductive age.<sup>1,5</sup>

In order to distinguish tubular adenoma from other classes histopathologic examination must be performed which will reveal small amount of stroma with tubular and acinar epithelial components.<sup>6,7</sup>

Tubular adenoma usually presents clinically as painless breast lump similar to fibroadenoma or asymptomatic mass detected by physical examination or imaging.<sup>1,3,7</sup>

Typically, tumors are firm, homogeneous, and well circumscribed and has a yellowish to tan-brown cut surface.<sup>4</sup>

Tubular adenomas mimic fibroadenomas in their radiologic appearance as they both appear as non-calcified well circumscribed lesions on ultrasound.<sup>2</sup>

Histologically, the tumor is characterized by the presence of proliferating round and uniform tubules lined by regular epithelial cells surrounded by myoepithelial cells, packed in a small amount of stroma, highlighted by CD34 immunostaining, and in certain areas of the tumor, the lumen of the tubules contain eosinophilic amorphous materials.<sup>2</sup>

Moreover, the CD34 immunohistochemical staining highlighted the inconspicuous small amount of the stromal component, characteristically found in tubular adenoma.<sup>2</sup>

In our case study we have used SMA as myoepithelial markers. This approach was intended to rule out any malignancy or any benign breast lesions that can mimic the histologic morphology of the tubular adenoma.<sup>2</sup>

Histologically, the differential diagnosis of tubular adenomas includes fibroadenoma, nipple adenoma, sclerosing adenosis, eccrine spiradenoma and tubular carcinoma.<sup>1</sup>

The management of tubular adenoma solely depends on the surgical excision of the tumor. Complete excision of the lump is curative. Core biopsy before surgical excision can be performed to obtain a precise diagnosis of the breast lesion.<sup>3</sup>

The risk of malignant transformation is almost non-existent, with only one case of probable transformation having been reported in literature.<sup>6</sup>

## CONCLUSION

Tubular adenomas are rare benign neoplasms arising from the breast, with a higher incidence rate among young women at reproductive age. Preoperative diagnosis of tubular adenoma is difficult as it is indistinguishable from a fibroadenoma on neither physical examination nor breast imaging. Surgical excision is fundamental in most cases to obtain a correct diagnosis and considered to be the treatment of choice for this particular histologic type of benign breast lesions.

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