

Mucinous Carcinoma of the Breast: A Case Series of Five Patients

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Abstract

Background: Mucinous carcinoma (colloid carcinoma) of the breast is a rare subtype of invasive ductal carcinoma, comprising about 1–4% of all breast cancers. It is characterized by abundant extracellular mucin production and usually has a favorable prognosis compared to other invasive breast carcinomas.

Objective: To describe the clinical, pathological, and prognostic characteristics of five patients diagnosed with mucinous carcinoma of the breast.

Methods: A retrospective study of five histologically proven cases was conducted with analysis of clinical, imaging, histopathological, and follow-up data.

Results: Patients ranged from 45–72 years. Three cases were pure mucinous carcinoma and two were mixed type. All tumors were ER/PR positive and HER2 negative. Pure variants showed no nodal metastasis.

Conclusion: Mucinous carcinoma generally carries an excellent prognosis, especially in pure variants. Accurate

histological distinction is essential for treatment planning.

Keywords: Mucinous carcinoma, colloid carcinoma, breast cancer, histopathology, prognosis

Introduction

Mucinous carcinoma of the breast is a distinct histological variant of invasive ductal carcinoma characterized by tumor cells floating in abundant extracellular mucin. It predominantly affects postmenopausal women and typically demonstrates an indolent clinical course. Two histologic subtypes are recognized: pure and mixed mucinous carcinoma. Understanding clinicopathological features is essential for accurate diagnosis and management.

Case Series

Case 1

A 68-year-old postmenopausal female presented with a painless lump in the left breast. Microscopy showed

epithelial clusters floating in mucin lakes. ER/PR positive, HER2 negative.

Diagnosis: Pure mucinous carcinoma.

Outcome: Disease-free at 2 years.

Case 2

A 56-year-old female presented with a firm lump in the right breast. Histology revealed mucinous carcinoma admixed with invasive ductal carcinoma (NST).

Diagnosis: Mixed mucinous carcinoma.

Outcome: No recurrence at 18 months.

Case 3

A 45-year-old woman had a self-detected breast lump. Histology showed mucin pools with low-grade tumor cells. Ki-67<10%.

Diagnosis: Pure mucinous carcinoma.

Outcome: No recurrence at 3 years.

Case 4: A 72-year-old female presented with a slow-growing mass measuring 4.6 cm. Mixed mucinous carcinoma with nodal metastasis in one lymph node.

Outcome: Stable disease at 1 year.

Case 5: A 63-year-old woman with screening-detected lesion. Core biopsy confirmed pure mucinous carcinoma. Outcome: Disease-free at 30 months.

Discussion

Mucinous carcinoma represents a rare, low-grade form of invasive breast carcinoma often mimicking benign lesions radiologically. Pure mucinous carcinoma demonstrates excellent prognosis with rare nodal involvement, whereas mixed variants behave more aggressively. Hormone receptor positivity is common, and HER2 amplification is rare. Findings in this series are consistent with existing literature.

Conclusion

Mucinous carcinoma of the breast is a distinct entity with favorable prognosis, particularly in pure variants.

Early diagnosis and accurate histological classification are essential to guide management and avoid overtreatment.

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Legend Figures

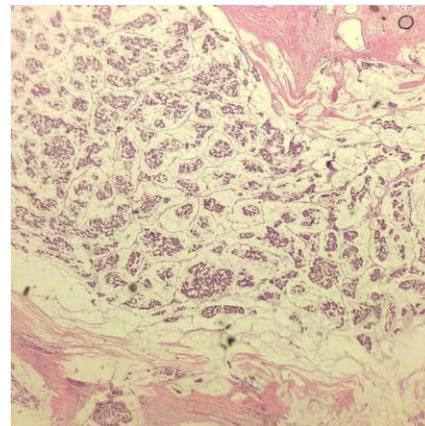


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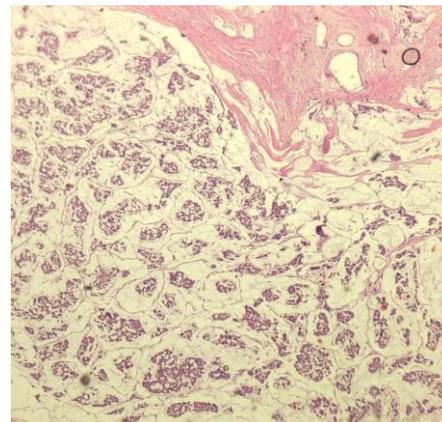


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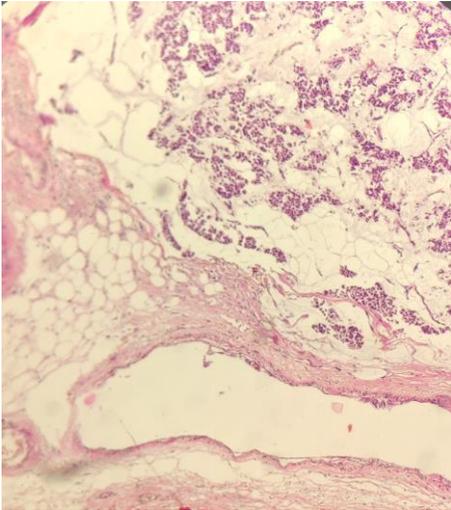


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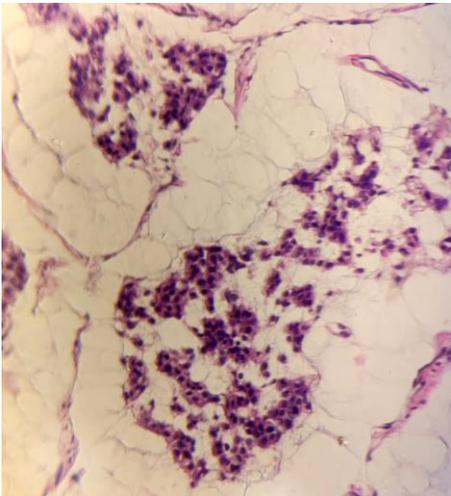


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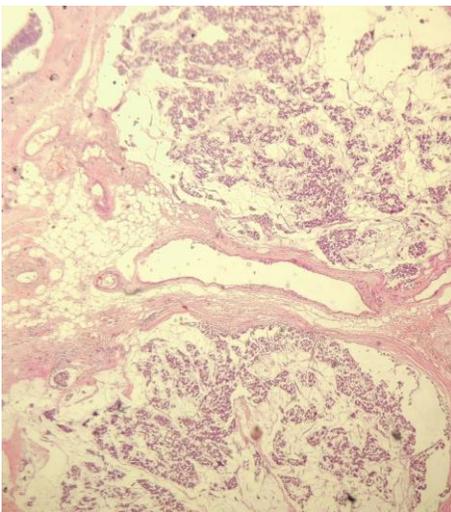


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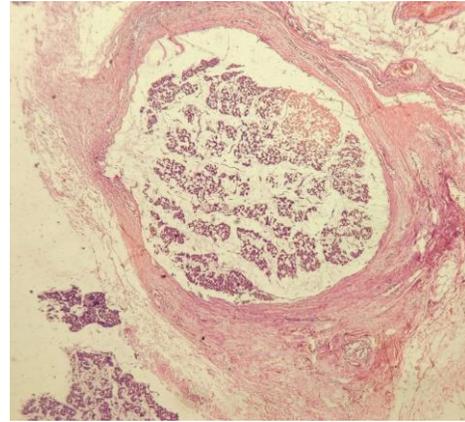


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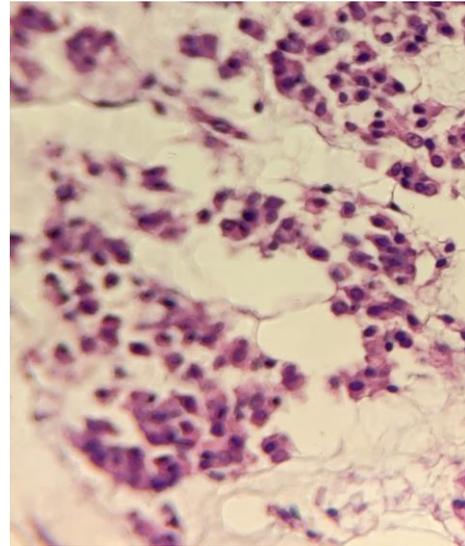


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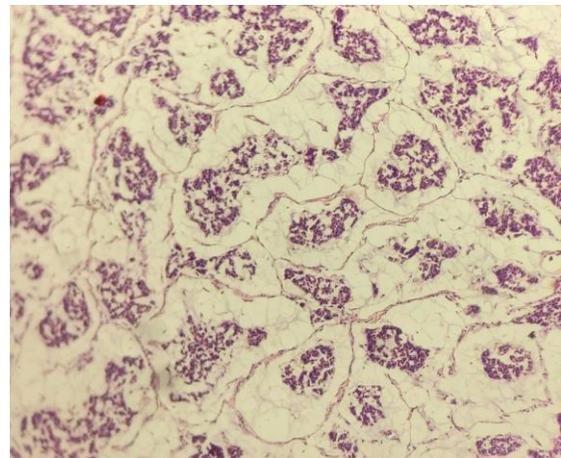


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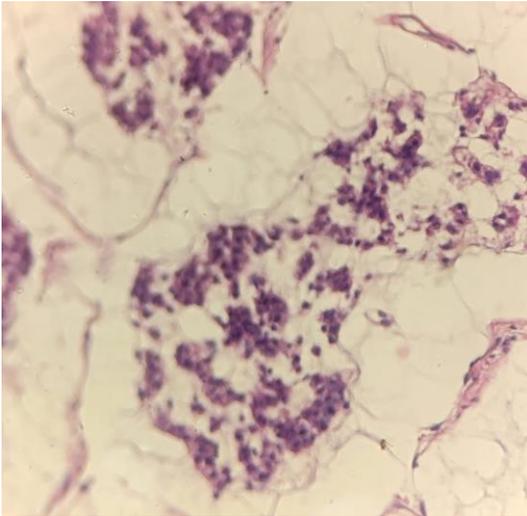


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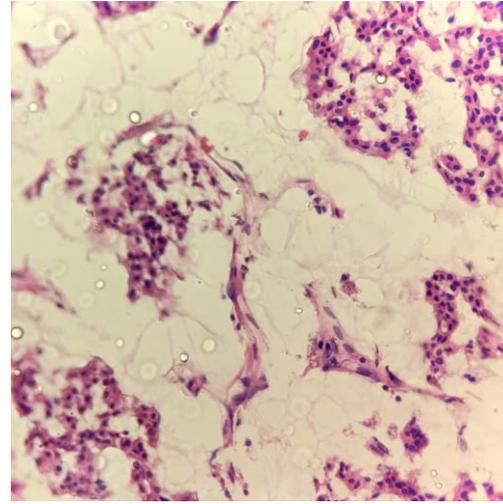


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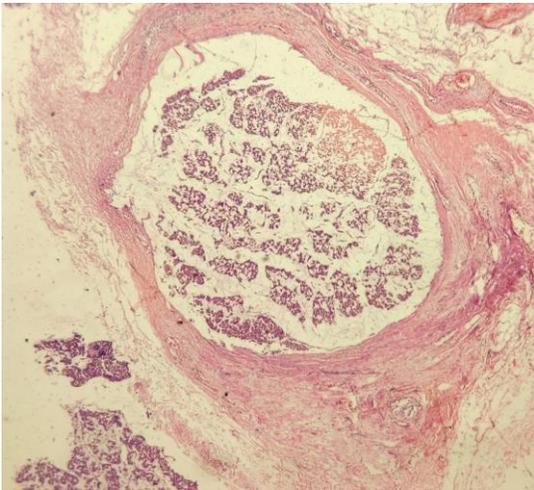


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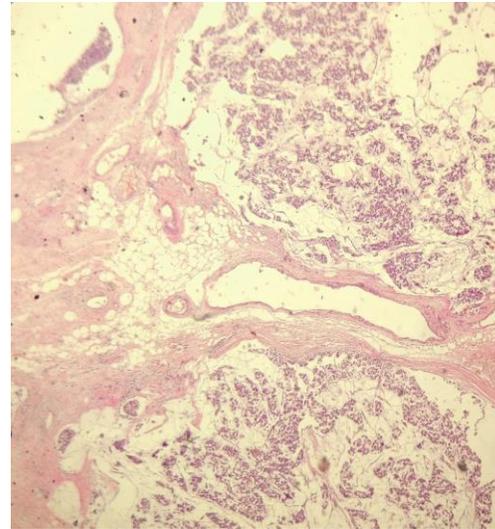


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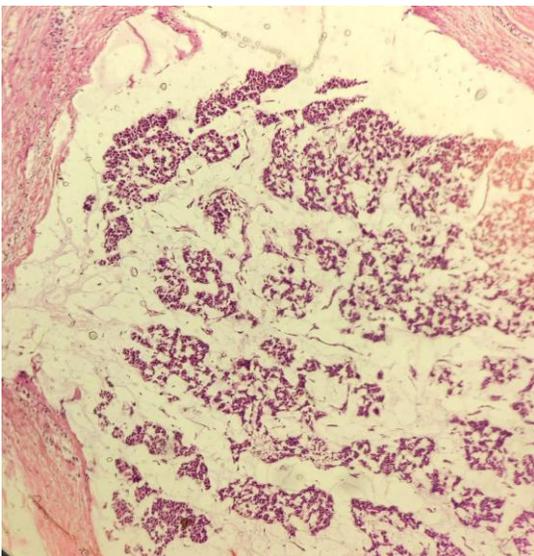


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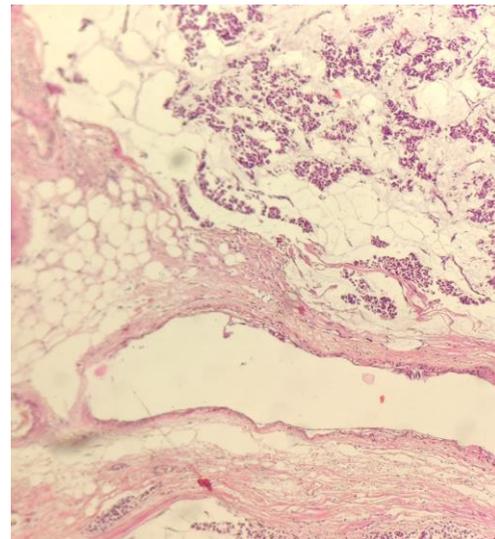


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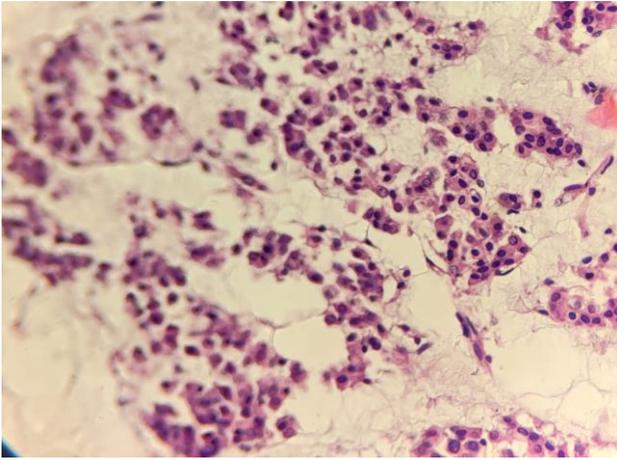


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