



Case Report - Mucinous Carcinoma of Breast

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Abstract

Many histologic types of breast carcinoma are identified with varying clinical and biological aspects. A unique entity of breast carcinoma is mucinous carcinoma presenting with a large amount of extracellular mucin. An elderly women came to OPD with complaints of swelling in breast which was later found to be diagnosed as Mucinous/ Colloid carcinoma -breast both cytologically and histopathological examination.

Keywords: Mucinous carcinoma, breast, colloid carcinoma.

Introduction

Mucinous carcinomas has abundant mucin which can be diagnosed even by gross examination most of the times. Mucinous carcinoma is restricted to those having large amounts of extracellular mucus [arbitrarily defined as more than one third of the tumour volume made up of extracellular mucin]. It has favourable prognosis than invasive breast carcinoma of no special type. It has incidence of 7% in women 75 years or older and 1% in women younger than 35 years. Distant metastasis is rare.

Clinical History

A 56 year old female presented with swelling in the left breast for 6 months. Fine needle aspiration was done over the swelling and a brownish slimy material was aspirated. The cytological diagnosis was mucinous or colloid carcinoma of the breast. Modified radical mastectomy was done and the specimen was sent for histopathological examination.

Cytology

Figure 1:

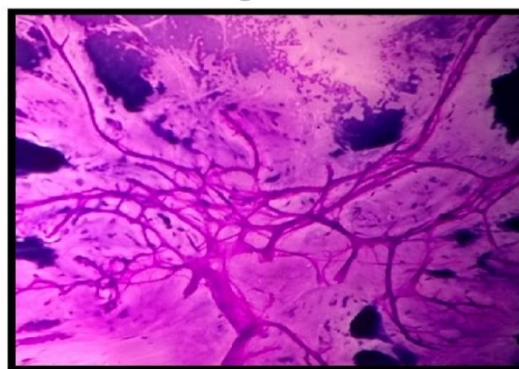


Figure 2:

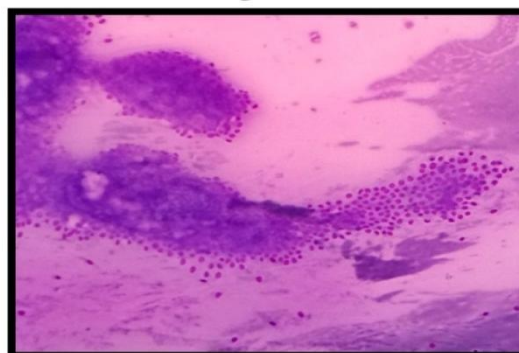
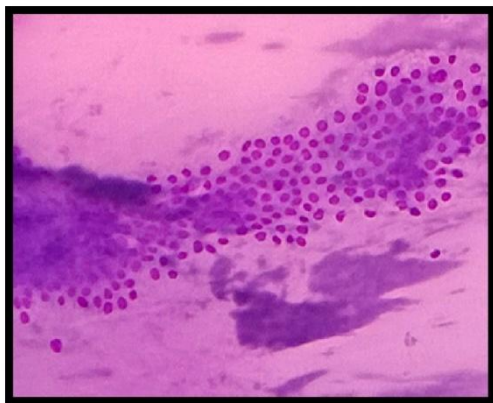


Figure 3:



Microscopy

Figure 6:

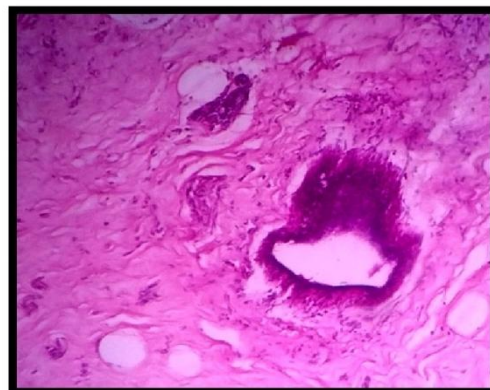
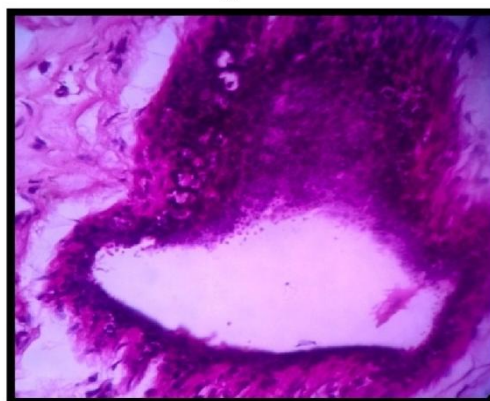


Figure 1: shows chicken wire pattern of blood vessels.

Figure 2, 3: shows cellular material composed of ductal epithelial cells arranged in monolayer sheets and loose clusters showing varying degrees of pleomorphism and anaplasia. Background exhibits proteinaceous fluid and mucinous material.

Figure 7:



Gross Morphology

The specimen received was breast with nipple and areola measuring 15x 13x 9 cm. On cut section- diffuse mucoid grey white grey black areas identified measuring 5x 4cm. a node measuring 0.3x 0.2cm identified.

Figure 8:

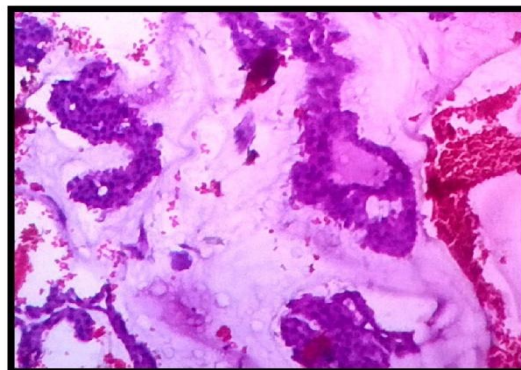


Figure 4:



Figure 5:



Figure 9:

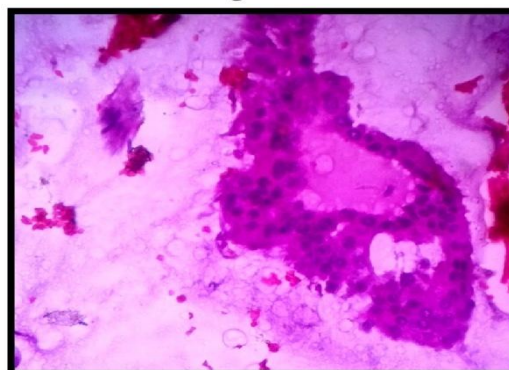


Figure 4, 5: shows modified radical mastectomy specimen showing on cut surface, grey white colloidal slimy areas.

Figure 6, 7, 8, 9: shows invasive carcinoma surrounded by abundant mucin.

Discussion

Mucinous carcinoma of the breast is very rare comprising 1% to 7% of all invasive breast cancers. This cancer has good prognosis (90% survival at 10 years). Women with age more than 45 years have high incidence of mucinous carcinoma of breast. It is a tumour with reduced growing potential. Lymph node metastasis is rare. The tumour is soft and gelatinous and cut surface is moist and glistening. This tumour has blunt border. The mean size is 1.8 to 2 cm.

Microscopically, nests, sheets, acini and trabeculae of epithelial cells, usually with some glandular elements are noticed within pools of extracellular mucin. The cytoplasm is granular, eosinophilic and hyaline. Usually low grade nuclear pleomorphism is seen with intracellular mucin. It has two types, the pure and the mixed type based upon histological differentiation. Mucinous carcinoma of the breast has a very favourable prognosis if presented in a pure pattern without any combination. If presented in a combination with invasive ductal carcinoma, the prognosis will be bad. The exception is micropapillary type of pure mucinous carcinoma of the breast which has worst prognosis. Ductal carcinoma insitu is present in 75% cases. The most common mixed pattern is mucinous differentiation of the duct and intraductal papillary carcinoma. The main differential diagnosis are cystic hypersecretory hyperplasia, cystic hypersecretory duct carcinoma, mucoid fibroadenoma and mucocele like lesion. Other patterns of mucinous carcinoma of the breast are neuroendocrine differentiation and mucinous carcinoma with lobular component.

Treatment for mucinous breast carcinoma is surgery with post-operative adjuvant radiotherapy, chemotherapy, and hormone therapy. Most of the mucinous carcinomas are hormone responsive tumours [estrogen- and/or progesterone-receptor positive].

Conclusion

Role of FNAC in early diagnosis of mucinous carcinoma of the breast has been clearly emphasized by this study.

Reference

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