

# CRYSTALLIZING GALACTOCELE – CYTOPATHOLOGICAL DIAGNOSIS

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## INTRODUCTION:

Crystallizing galactocele is an extremely rare, unusual presentation of galactocele.

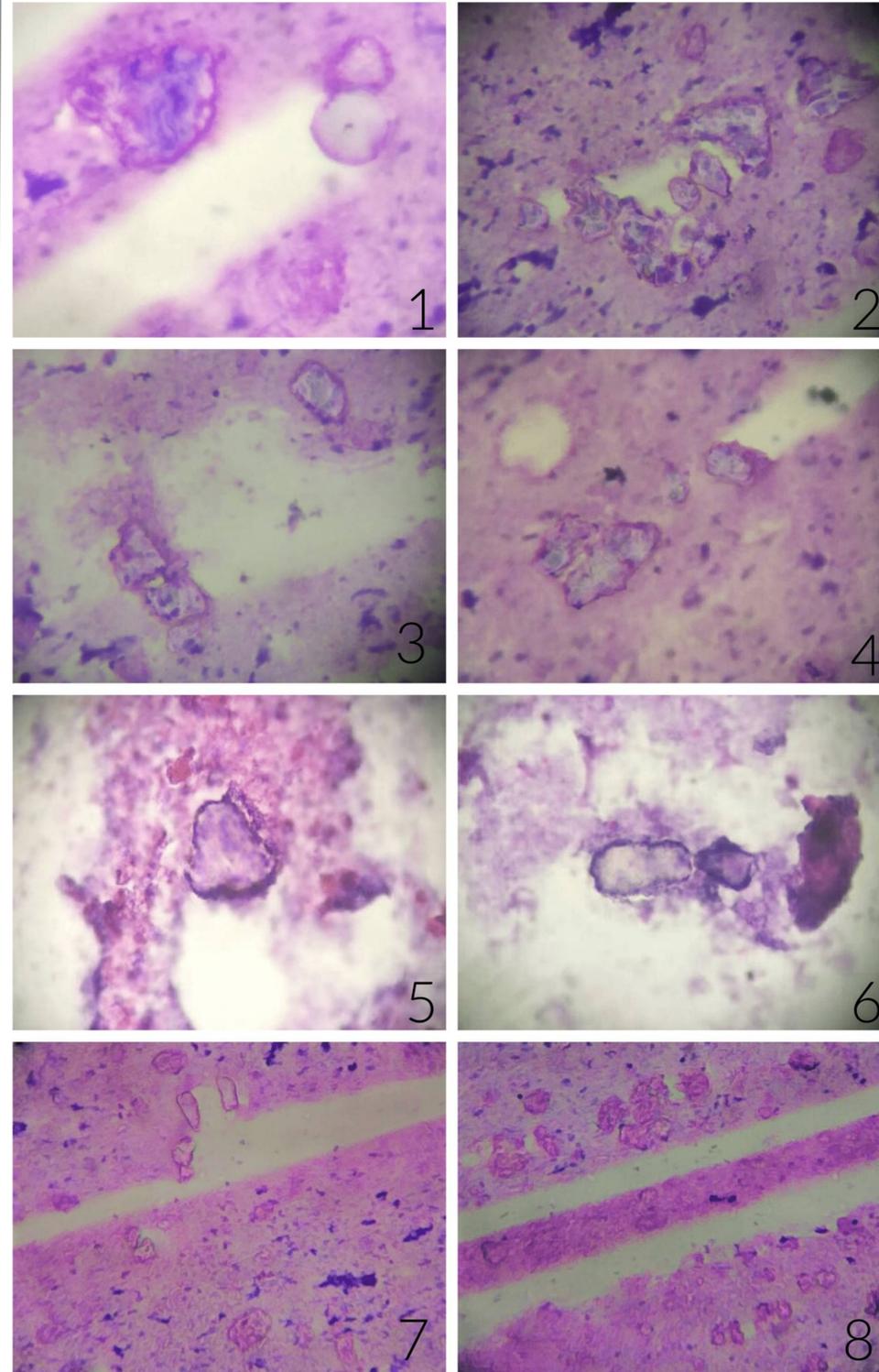
## CASE HISTORY:

- A 30-year-old lactating lady.
- Chief complaint: Slow growing, painless lump in the left breast since 6 months.
- Physical examination: Discrete, firm, non-tender, mobile mass measuring about 3X3 cm in the upper, outer quadrant of the left breast.

## FINE NEEDLE ASPIRATION CYTOLOGY:

- Aspirate: Thick, milky material with a reduction in the size of the mass after aspiration.
- Geimsa stained smears: Numerous, distinct, compact, semi-transparent to dark blue/purple, refractile crystals with well-defined borders of variable shape and size were noted. B/g showed granular, amorphous, proteinaceous material admixed with frothy-appearing lipid micelles. (Fig. 1-4)
- Papanicolaou stained smears: Homogenous crystals were noted against proteinaceous and frothy background. Both crystals and background showed washed out appearance. (Fig. 5-6)
- H&E stained smears: Numerous, distinct, compact crystals with well-defined borders of variable shape and size were noted against a background of proteinaceous material. (Fig. 7-8)

Based on clinical history of lactation and typical cytological findings, a diagnosis of crystallizing galactocele was rendered.



## DISCUSSION:

- First case report: Raso DS et al in 1997. [1]
- Incidence: Less than 10 cases of crystallizing galactocele have been reported till date.
- Etiopathogenesis: The secretions within galactocele contain acid and neutral mucins, lipids, lysozyme, albumin, IgA secretory piece, and whey protein. Supersaturation of these milk substances under acidic environment leads to the formation of calcium lactate or tyrosine crystals. [2]
- Management: FNAC is often considered to be both diagnostic and therapeutic in cases of galactocele. [3]
- Differential diagnosis: Calcium phosphate crystals in malignant breast lesions, calcium oxalate crystals in benign breast lesions, gouty mammary tophi, amyloid. [1]

## TAKE HOME MESSAGE:

The diagnosis of crystallizing galactocele should be considered whenever milky/viscous/chalky material is aspirated on FNAC from the breast lump of a lactating/pregnant lady.

## REFERENCES:

- 1.Raso DS, Greene WB, Silverman JF. Crystallizing galactocele: A case report. *Acta Cytol.* 1997; 41: 863 – 70.
- 2.Singla T, Singla G, Singla S, Singh M. FNAC diagnosis of crystallizing galactocele- An unusual presentation. *J Cytol.* 2020; 37:149-50.
- 3.Nikumbh DB, Desai SR, Shrigondekar PA et al. Crystallizing galactocele–An Unusual diagnosis on Fine needle Aspiration cytology. *J Clin Diagn Res.* 2013; 7(3): 604-5.