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Letter to the Editor

Thyroidisation of breast – An intriguing entity

Dear Editor,

'Thyroidisation' of breast or cystic hypersecretory hyperplasia of breast is a rare entity in the spectrum of findings encountered in fibrocystic disease of breast. This entity is composed of cystically dilated ducts of various sizes lined by flat to columnar, orderly bland epithelial cells enclosing colloid-like material.¹

A 28 year old female patient reported to surgical OPD with complaints of lump in the left breast since 6 months. On examination the lump was 3×3 cm in size, in the outer lower quadrant, firm, mobile and non-tender. The ipsilateral nipple was normal with no history of discharge. Routine investigations were within normal limits. Fine needle aspirate smears showed only few clusters of benign epithelial cells with

proteinaceous material and occasional cyst macrophages and lymphocytes.

The patient was taken up for lumpectomy. The gross specimen was a globular greyish white mass measuring $3 \times 3 \times 4$ cm. Cut surface showed few varying sized cysts with the intervening greyish white firm areas (Fig. 1A). Extensive samples were taken and subjected to histopathological examination. Haematoxylin and Eosin stained sections showed few normal appearing terminal duct lobular units. Benign changes were seen in the form of cystically dilated ducts enclosing proteinaceous material and cyst macrophages (Fig. 2B and C). Areas of hyalinization, foci of adenosis, foci of ducts showing apocrine change and many areas showing thyroidisation of ducts were seen (Fig. 2A). Areas of fat necrosis were also seen with accompanying macrophages and multi-

Fig. 1 – (A) Cut section of specimen of lumpectomy showing few cysts with surrounding greyish-white areas. **(B)** Hematoxylin and Eosin stained section (100×) shows varying sized ducts lined by flat to cuboidal cells enclosing colloid like material. **(C)** Hematoxylin and Eosin stained section (400×) shows flat to cuboidal ductal epithelial cells with moderate cytoplasm and round to oval vesicular nuclei. Also seen are the outer myoepithelial cells.

Fig. 2 – (A) Hematoxylin and Eosin stained section (100×) shows ducts lined by epithelial cells showing characteristic apocrine change in the form of apical snouting and large vesicular nuclei. (B) Hematoxylin and Eosin stained section (100×) shows cystically dilated ducts enclosing thin proteinaceous material and cyst macrophages. (C) Hematoxylin and Eosin stained section (100×) shows areas of fat necrosis with numerous macrophages. (D) Hematoxylin and Eosin stained section (100×) shows numerous infiltrating lymphocytes around the ducts.

nucleated giant cells. Areas of dense mixed inflammatory cells were seen infiltrating and destroying the terminal duct lobular units (Fig. 2D). Epithelial cells enclosing the colloid-like material were flat to cuboidal having a round to oval large vesicular nucleus (Fig. 1B and C). However, no evidence of atypical hyperplasia or ductal carcinoma in-situ (DCIS) were seen. An opinion of cystic hypersecretory hyperplasia with mastitis was given.

Cystic hypersecretory hyperplasia is seen as part of the spectrum of fibrocystic disease of breast, though it has not been included in the WHO classification of breast lesions. Clinically it presents as a palpable mass or occasionally as an asymptomatic lump with mammographic abnormality. Grossly these may resemble juvenile papillomatosis. However they usually present as large, ill-defined, firm to rubbery, spongy mass of fibrous tissue containing multiple cysts. It is usual to see abundant thick, sticky material resembling colloid within the cysts. As atypia and DCIS of cystic hypersecretory type are known to co-exist, it is essential to generously sample the specimen.²

Histopathology shows characteristic cystically dilated ducts of various sizes with colloid-like material, often with parallel fracture lines and retraction halo. Ducts are lined by flat, orderly, columnar epithelial cells with eosinophilic cytoplasm and round to oval bland vesicular nuclei. Atypical features may be seen in the form of epithelial crowding and enlarged nucleus lacking normal polarization, hyperchromasia and rare mitotic figures. Documented association also seen with pregnancy-like (pseudolactational) hyperplasia.³ These cells are known to be positive for both Estrogen Receptor (ER)

and Progesterone Receptor (PR) on Immunohistochemistry (IHC). Treatment involves wide local excision.¹

It is important to differentiate cystic hypersecretory hyperplasia from its more worrisome spectrum of lesions i.e. Atypical cystic hypersecretory hyperplasia, cystic hypersecretory DCIS and Invasive cystic hypersecretory carcinoma. On gross the spectrum of cystic hypersecretory lesions appear similar with presence of dilated ducts filled with colloid-like material. However the microscopic features which help identify carcinoma are the characteristic micropapillary projections lined by atypical cells, presence of frequent mitosis and presence of an invasive component.⁴

'Thyroidisation' of breast or cystic hypersecretory hyperplasia is a rare entity which when found can be treated by a simple wide local excision. However extensive sampling is warranted to rule out any component of DCIS or invasive carcinoma.

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Maj M.G. Manoj*

Graded Specialist (Pathology), 160 Military Hospital, C/O 99 APO, India

Maj Vitesh Popli

Graded Specialist (Surgery), 160 Military Hospital, C/O 99 APO, India

*Corresponding author.

E-mail address: manoj.gopal@gmail.com

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Letter to the Editor

Dear Editor,

We read with extreme interest the Student Research article titled “A longitudinal study to determine association of various maternal factors with neonatal birth weight at a tertiary care hospital” by Misra et al. published in *Med J Armed Forces India* 2015;71:270–273.¹ It is a relevant and ground level research work done by a young medical graduate on an issue that has impact on crores of people in a developing nation like India.

In their systematic review of 35 studies on outcomes of maternal weight gain, Siega-Riz et al. found strong evidence between inadequate gestational weight gain and decreased birth weight and excessive gestational weight gain and increased birth weight.² The outcome highlighted by the present study corroborates this observation again. The issue related to the suboptimal birth weight in babies born to mothers with inadequate weight gain during pregnancy particularly stresses the importance of awareness about benefit of adequate weight gain among prospective mothers. This is particularly relevant during the present day scenario where weight gain is considered to be a bad trend at any time, more so in body image conscious young mothers.

Long-term consequences of inappropriate birth weight need to be kept in mind as both extremes of birth weight affect early adult weight and add to the future risks of developing lifestyle diseases like diabetes, hypertension and cardiovascular diseases.^{3,4}

The study by this young author as primary worker reinforces the importance of recording BMI at the initial prenatal visit and need for educating them about diet, exercise and appropriate weight gain, at the initial and each antenatal visit throughout pregnancy.

It is heartening to note that young researchers have started focusing on the health issues that are relevant and address the actual need of our country. This becomes further apt considering the large load on health care of pregnant mothers and vulnerable neonates. We also appreciate the editorial

team for giving space for such encouraging endeavours by the enthusiastic medical graduates.

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Lt Col Deepak Joshi*

Associate Professor, Department of Pediatrics, Armed Forces Medical College, Pune 40, India

Surg Capt K.M. Adhikari

Professor, Department of Pediatrics, Armed Forces Medical College, Pune 40, India

*Corresponding author

E-mail address: deepakjoshi6562@yahoo.co.in (D. Joshi)

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