**Standardisation of the Diagnostic Methods for the Patients Aged 25-29 with Benign Breast Lesions**

**Descriptor:**

The aim of this audit is to detect a cut-off age criterion for breast lesions with benign ultrasonographic appearance.

**Background:**

Ultrasonography (US) is the first line diagnostic method to assess palpable or incidental breast lesions in the patients <40 age with P2 clinical findings (1). Fibroadenomas are the commonest benign breast solid lesions in young patients in their 30s and 40s but can be seen at any age (2). They are ovoid, well- circumscribed, mobile, smooth, non-tender and usually in 2-3 cm in size, but they may be up to 10 cm. They may have gentle lobulations, but calcifications, irregularity and posterior shadowing are not expected to find (1,2). There is no clear relation between carcinoma and fibroadenoma (2). As per Royal College of Radiologists (RCR) guideline, US can safely be used to diagnose a presumed fibroadenoma in the patients under 25 of age. After 30 years of age, the guideline recommends needle biopsy due to increased risk of malign lesions which can mimic fibroadenoma. There is a gap for the patients between 25- 30 of age and the guideline recommends local audits for detecting a cut-off value for every centre for the lesions without any suspicious features such as irregularity or posterior acoustic shadowing (1).

This audit aims to avoid unnecessary invasive breast procedures under 30 years of age. The biopsy results of the presumable fibroadenomas with typical features in the patients under 30 years of age will be checked retrospectively in the last 2 years to determine a cut-off age and create a local standard.

**The Cycle**

**The standard:**

There is an absence of nationally agreed standard cut-off age value for presumed fibroadenomas in the patients between 25-29 years of age. A local cut- off age should be determined for presumable fibroadenomas. A presumable fibroadenoma should be ovoid, well- circumscribed, mobile, smooth, non-tender without any irregularity, posterior acoustic shadowing, heterogenicity, microcalcification or firmness (1,2).

**Target:**

0% of presumable fibroadenomas will be biopsied under the cut-off age which will be determined by the local retrospective assessment unless presence of a clinical or radiological uncertainty.

**Assess local practice**

**Indicators:**

The audit indicators must be met the aforementioned criteria of presumable fibroadenoma on the US reports.

**Data items to be collected:**

Each breast US report which describes a mass will be assessed from Radiology information system (RIS) as per the age criteria (25-29 years of age). The preliminary data will be collected retrospectively to suggest a cut-off. For instance, if there is no malignancy under 30 years of age, the new cut-off age value will be 30.

All the US reports and images with a presumed benign lesion which was not biopsied as per the proposed criteria will be checked at the end of every month within a definable period (e.g. 6 months) to assess the new practice, that will help to increase safety of the practice. This will be carried out by two experienced breast radiologists. In case of any discrepancy, the patients will be recalled for biopsy to exclude malignancy. Likewise, all cancer diagnoses in patients between 25 - 30 of age will be reviewed to assess whether they meet the new criteria. The practice will be reevaluated as per the data which have been procured.

**Suggested number:**

All the eligible reports in the department within a definable period retrospectively (e.g year) and prospectively ( e.g 6 months).

**Suggestions for change if target not met:**

1. The results of this audit should be shared and discussed with the radiologists and radiographers who implement US and biopsy as well as breast clinicians who request needle biopsies.

2. Presentations should be done in the academic and other department meetings

3. The audit to be repeated in 6 months

**Resources:**

Radiology information system (RIS) and Picture archiving computer system (PACS)

**References:**

1. Salati SA. Breast fibroadenomas: a review in the light of current literature. Pol Przegl Chir. 2020 Dec 7;93(1):40-48. doi: 10.5604/01.3001.0014.5676. PMID: 33729177.
2. Coriaty Nelson Z., Ray R.M., Gao D.L., Thomas D.B.: Risk factors for fibroadenoma in a cohort of female textile workers in Shanghai, China. Am J Epidemiol., 2002; 156(7): 599–605.

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