

Case Report of Benign Breast Tumor: Fibroadenoma Mammæ

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Abstract. *Fibroadenoma mammae is a benign breast tumor that occurs due to abnormal proliferation of periductal tissue into the lobules, often found in the upper lateral quadrant area due to the highest distribution of glands in this tissue. FAM is commonly experienced by younger women between the ages of 20-40 years, with a median age of 30 years. The clinical appearance of FAM lumps is typically lobulated, mostly 2-3 cm in diameter, with a firm and mobile consistency, without causing inflammatory reactions, skin dimpling, or nipple retraction. In this case, we report an 18-year-old female patient diagnosed with a breast tumor. The history revealed a lump in the left breast that enlarged within 1 month, initially the size of a marble and growing to the size of a quail egg, occasionally causing pain. On physical examination, the lump was palpable, mobile, without tenderness or signs of malignancy. Ultrasound examination showed signs of a benign tumor.*

Keywords: *fibroadenoma mammae, benign breast tumor, lump*

1. BACKGROUND

Fibroadenoma is one of the most common benign breast tumors in women. In the adolescent population, the overall incidence of fibroadenomas is 2.2%. FAM accounts for 68% of all breast masses and 44%–94% of breast lesion biopsies. Histologically, fibroadenomas are benign biphasic tumors with epithelial and stromal components. (Breast fibroadenomas in adolescents).

Although FAM is a benign tumor, one study showed FAM to be an independent risk factor for breast cancer, while another report provided evidence that FAM was associated with a twofold relative risk of developing invasive breast carcinoma after 20 years. (Genetics and genomics of breast fibroadenomas). In Indonesia there is no definite data regarding the incidence of FAM. However, it is estimated that the incidence of FAM will increase every year. Based on data from the Jakarta Breast Center, it shows that of the 2,495 patients who came from 2001 to 2002, 79% of them suffered from benign breast tumors and the remaining 14% suffered from cancer. The incidence of breast cancer in Indonesia in women in 2018 was 58,256 new cases (42.1%) with a death toll of 22,692 (17.0%). (Alini, & Widya, L. 2018).

Fibroadenomas can range from asymptomatic masses to painful, rapidly growing tumors that can cause significant aesthetic distortion of the breast. Given the prevalence of fibroadenomas in the adolescent population and the psychosocial morbidity in adolescents, because palpable masses in the breasts of adolescents cause anxiety for patients and families

so it is very important for physicians caring for adolescent patients to be familiar with and up to date. to date with this disease process. (Breast fibroadenomas in adolescents).

2. THEORETICAL STUDY

Fatigue generally refers to a reduction in work ability and endurance which is characterized by a sensation of tiredness and decreased work motivation. (Alini, & Widya, L. 2018). There are two factors that cause work fatigue, namely: external factors (work environment and including workload, work shifts and work periods) and internal factors (individual components including gender, nutrition, sleep quality, age and smoking habits). (Jurnal Kesehatan Medika Saintik, 2022). For workers in palm oil mills, most of the causes of fatigue come from work factors, including ergonomic factors such as: bending the neck, back and shoulders, lifting work tools for a long time can increase levels of lactic acid which is a metabolic product of fatigue. (Jurnal Kesehatan Medika Saintik, 2022).

Breast fibroadenoma is a benign fibroepithelial tumor most commonly encountered in women of reproductive age, although it can be diagnosed at any age. Fibroadenoma consists of a proliferation of stromal and epithelial components. The mechanisms underlying the pathogenesis of fibroadenomas are still not completely understood. (Genetics and genomics of breast fibroadenomas). FAM most often occurs in women between 14 and 35 years of age. The causes of fibroadenomas are debatable, but professionals believe that the lesions have a hormonal etiology associated with increased sensitivity of breast tissue to the female reproductive hormone estrogen. Fibroadenomas usually grow during pregnancy and tend to shrink during menopause. This supports the hormonal etiology theory. Women who use oral contraceptives before the age of 20 tend to suffer from fibroadenomas at higher rates than the general population. Fibroadenomas arise from functionally and mechanically important stromal and epithelial connective tissue cells in the breast. This tissue contains receptors for estrogen and progesterone. For this reason, fibroadenomas tend to multiply during pregnancy due to excessive production of female reproductive hormones. Hormone sensitivity causes excessive proliferation of breast connective tissue. Genetic factors of the mediator complex subunit 12 (MED12) gene are also important in pathophysiology fibroadenoma. (Breast Fibroadenoma, 2022). FAM is a slow growing, solid and solitary nodule, although multifocal lesions can also be found.

Clinical symptoms of fibroadenoma are painless, unilateral, in the form of a solid lump, not filled with fluid. Fibroadenoma is often referred to as the 'breast mouse' (breast mouse) because of its high mobility. Fibroadenoma is a marble-like mass consisting of epithelial and

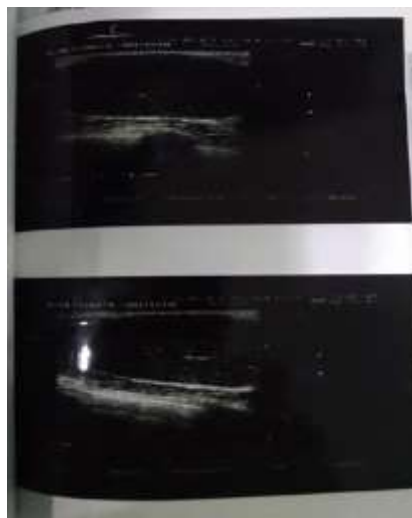
stromal tissue located under the skin of the breast. These firm, spongy masses with regular boundaries often vary in size. (Breast Fibroadenoma, 2022).

Case Report

An 18 year old woman came to the Surgical Polyclinic at Dumai Regional Hospital with complaints of a lump in her left breast. The lump started to enlarge \pm 1 month ago. Initially the lump was small like a marble but over time it got bigger and bigger as a quail egg. Sometimes accompanied by pain. When touched, there is a lump in the left breast, mobile, smooth surface, feels soft. There is no tenderness, no signs of inflammation, the nipple does not appear inverted. Denied history of drug or food allergies. The patient has never experienced the same complaint before. There are people in the family who experience similar illnesses.

On physical examination, it was found that his general condition looked good, his consciousness was GCS 15, his vital signs were within normal limits. On physical examination, localized status of the left breast showed that the mammary skin color was the same as the surrounding skin color, no thickening of the mammary skin was found, both breasts appeared symmetrical, no mass was palpable, dimpling mammae, retraction papilla mammae, papilla direction mammae pointed, no visible redness, discharge (-), nipple inverted (-), peau d'orange (-). Meanwhile, when palpated, it was found that when palpated the lump in the left breast was persistent, the surface was smooth, mobile, felt soft, the size of a quail egg, there was no tenderness and enlargement of the lymph node.

Blood laboratory examinations showed normal results. On ultrasound examination the following results were obtained: in the mammae sinistra, cutis and subcutis were normal, at 10 – 11 hours a hypoechoic mass appeared with dimensions of 38.8 x 38.5 x 24.3 mm. Effects of mammary tumors sinistra, suspect FAM.



Picture 1. ultrasound examination

3. RESULTS AND DISCUSSION

In the case of the patient, an 18 year old woman, came with complaints of a lump in her left breast since \pm 3 years SMRS. The lump is initially small but over time the size of the lump gets bigger. The lump sometimes felt painful, but now it is painless and can be moved. There is no fluid coming out of the lump, there are no lumps anywhere else.

On physical examination of the mother dextra was obtained on inspection, it was found that the mammary skin color was the same as the surrounding skin color, the mammary skin was thickened (-), both breasts appeared symmetrical, mass (-), hollow or dimpling mammae (-), retraction or depression of the papilla mammae (-), papilla direction mammae pointed, no visible redness, discharge (-), nipple inverted (-), peau d'orange (-). Meanwhile, during palpation, the lump in the left breast was found to be persistent, smooth surface (+), mobile (+), felt soft (+), tenderness (-) and lymph node enlargement (-).

In this case, the patient was initially suspected of having FAM because based on age, FAM is often found at younger ages, 14-35 years. Age is the most important factor in the incidence of fibroadenoma. Therefore, when obtaining a medical history, age is the most important factor to consider. A family history of breast cancer is also important. Female patients who have a first-degree relative with breast cancer should be monitored and observed more carefully for malignant features than patients without this family history. Fibroadenomas most often occur in the upper outer quadrant of the breast. (Breast Fibroadenoma, 2022). Sometimes it is difficult to differentiate from breast cysts. Fibrocystic disorders are also often found between the ages of 20-30 years.

When touched, the mass is well defined, springy, can be shaken, and is painless. This is in accordance with the clinical signs found in FAM. Meanwhile, on physical examination, it is difficult to differentiate from FAM or breast cysts. However, fibrocystic breasts are almost always accompanied by pain. The nature of the pain is quite significant, namely: it fluctuates according to the menstrual cycle, is bilateral, is not localized, and spreads to the shoulder or axilla and can even spread to the arm. Supporting examinations for lumps in the breast are carried out by ultrasound, mammography and biopsy. This patient underwent a breast ultrasound examination because the patient's age was <35 years. The results of the breast ultrasound showed that the cutis and subcutis were normal and at 10 - 11 hours a hypochoic mass was found measuring 38.8 x 38.5 x 24.3 mm. Ultrasonography easily differentiates solids from cystic masses. On ultrasound, fibroadenomas are usually seen as well-circumscribed, round to ovoid, or macrolobulated masses with generally uniform hypoechogenicity.

In this case the FAM was excised and a tissue mass the size of a quail egg was obtained. In the majority of cases, fibroadenomas do not require treatment. FAMs shrink and disappear over time, but if they are large and press on other breast tissue, they should be removed. Many women decide not to undergo surgery because the lesion is harmless and does not involve a long-term risk of malignancy and surgery can distort the shape of the breast. The doctor may decide to remove the fibroadenoma if it is large and continues to get bigger. Indications for surgical intervention include rapid growth, size greater than 2 cm, and patient request. There are 2 surgical procedures used to remove fibroadenomas: 1. Lumpectomy or excisional biopsy: In this procedure, the surgeon removes the fibroadenoma and sends it to the laboratory for further evaluation. 2. Cryoablation: The surgeon uses a cryoprobe to freeze and destroy the cellular structure of the fibroadenoma. A core needle biopsy should be performed before cryoablation to confirm fibroadenoma.

4. CONCLUSIONS AND RECOMMENDATIONS

Fibroadenoma is one of the most common benign breast tumors in women aged 14-35 years. Experts still debate the exact cause of FAM, but it is suspected that hormonal and genetic influences play a role in the incidence of FAM. To confirm the diagnosis of FAM through anamnesis, physical examination and supporting examinations. On physical examination, FAM was found to be a well-defined mass, springy, movable, painless. Supporting examinations for FAM include breast ultrasound, mammography and biopsy to determine whether it is malignant or not. Treatment does not require treatment, but if the size exceeds 2 cm and is pressing on the tissue and at the request of the patient, excision can be performed.

Mammary tumors can be detected early with the following: healthy lifestyle and BSE, for women who reach the age of 40 years it is recommended to carry out cancer risk assessment survey. Women with risk factors receive a referral for mammography every year. Normal women receive mammography referrals every 2 years until they reach the age of 50 years. Tertiary prevention is usually directed at individuals who have tested positive for breast cancer. Proper treatment of breast cancer sufferers according to their stage will be able to reduce morbidity and extend the life expectancy of sufferers. Tertiary prevention is important to improve

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