

## JUVENILE GIANT FIBROADENOMA MAMMAE - CASE REPORT

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Fibroadenoma mammae is a mixed fibroepithelioma benign breast tumor caused by proliferation of epithelium and fibrovascular stroma. It makes 7% of all nodular breast changes. Most often, it occurs in women aged 30 to 40 years. Tumor manifests as a particular change, it comes in a round or oval shape and is usually from 1 to 10 centimeters in size. Its main characteristic is that it owns connective tissue capsule that does not allow uncontrolled penetration of tumor cells into the surrounding tissue. The paper presents the case of a 9-year-old patient with tumor in her left breast. This patient states that she noticed the first change three months before visiting the doctor. She was adequately prepared for the surgery and operated under general endotracheal anesthesia. This surgical intervention involved the extirpation of tumor to healthy tissue. Juvenile giant fibroadenoma is a rare case in clinical practice at this age. Treatment is surgical and involves the total extirpation of the tumor. Also, the cases that led to malignant alteration have been described. *Acta Medica Medianae 2010;49(4):49-51.*

**Key words:** *fibroadenoma, breast, extirpation*

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### Case report

Nine-year-old girl was admitted to general surgery department due to swelling and pain in her left breast. She said that she first noticed the swelling in her left breast three months before visiting the doctor. The patient said her left breast started to grow and swell suddenly compared to the other breast. Three months after the change on her left breast had occurred, the patient was sent to surgical department where she was kept for treatment.

Immediately after the patient was sent to the surgical department, she had clinical, laboratory, radiological and ultrasound analyses performed. The results of laboratory analyses were in the range of referential values, except the sedimentation finding that showed the value sed - 47/105. The tumor marker CA15-3 was determined to be in the range of referential values. Radiography of the lungs did not show any pathological changes.

Breast ultrasound examination showed hyperechogenic formation that filled almost the whole left breast. The change was 12x7 cm in size and it did not infiltrate into the surrounding structures.

Abdominal ultrasound examination was regular without the presence of enlarged lymphoglandulae in the abdomen and small pelvis. In addition, the ultrasound examination of both axillary regions did not show enlarged lymphoglandulae.

Considering the age of the patient and the region she lives in, the surgical collegium presented

### Introduction

Fibroadenoma mammae is a mixed fibroepithelioma breast tumor. It occurs during the long-term or absolute increase of estrogen level in blood (1). This tumor enlarges its volume during the menstrual cycle and in pregnancy due to its reaction to hormone stimulation. Fibroadenoma rarely has malignant potential.

There is a histological domination of connective and epithelial components of tumor with atypical multiplication of canals and acini. Sometimes, squamous metaplasia of epithelium can be seen.

Fibroadenoma mammae is a particular tumor sized 1 to 10 cm, with round or oval shape. During pregnancy and menstrual cycle it shows the tendencies to grow. It may cause problems if it reaches giant dimensions. Clinically, it manifests as a swelling in the area of one breast that is disproportioned compared to the other. It grows progressively and in particular cases it may have giant dimensions.

The diagnosis is set according to anamnesis, clinical presentation, ultrasound and pathological findings.

Surgical treatment is certainly a primary treatment modality, and it involves the total extirpation of tumor to healthy tissue (2).



Figure 1. Patient with left breast tumor. Disproportion between left and right breast can be seen



Figure 2. Ultrasound finding of left breast tumor; the whole left breast is filled with tumorous mass



Figure 3. Operative finding of breast fibroadenoma and relation to healthy breast tissue



Figure 4. Appearance and size of extirpated breast fibroadenoma

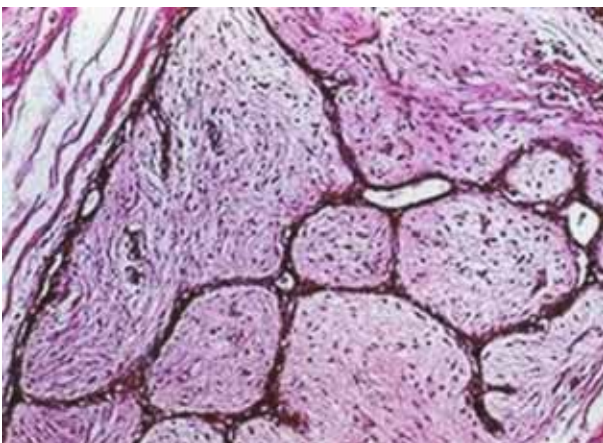


Figure 5. Histological preparation appearance with dominant tubular structures coated with hyperplastic epithelium

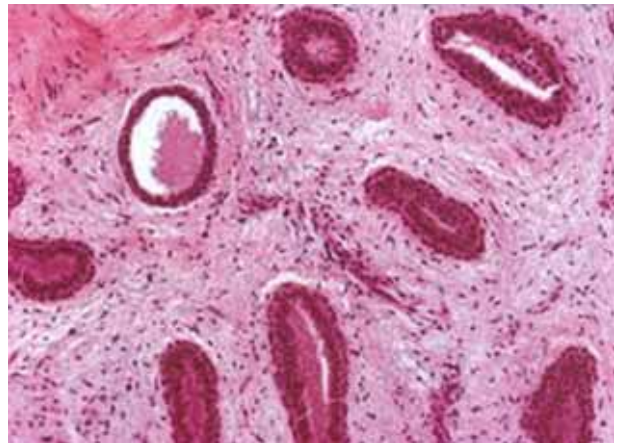


Figure 6. Histological appearance of preparation, tubular structures in fibrous stroma with myxomatous changes

this case to the Oncology Council for breast that suggested surgical intervention in original health-care facility.

Following the adequate preoperational preparations, this surgical intervention was performed under endotracheal anesthesia. Surgical intervention involved complete extirpation of tumor to healthy tissue.

Extirpated tumor was gray-white in color, weighted 470g and it was 13x8 cm in size. It had a capsule that made us differentiate it from the healthy breast tissue.

Operative and post-operative courses were uneventful. The wound healed per primam intentionem. Stitches were removed on the seventh day after surgery when the patient was released from the department.

Microscopic examination revealed the tumor tissue having tubular structures which were coated with hyperplastic epithelium without signs of atypia, which suites to epithelial hyperplasia.

The definite pathohistological diagnosis was juvenile giant fibroadenoma mammae.

### Discussion

Fibroadenoma mammae is usually a singular change 1 to 10 cm in size. Tumor usually occurs in women aged 30 to 40 years. It is extremely rare in children under the age of 10 years (3). The definite diagnosis can be set only with pathohistological examination (4). No other diagnostic method can certainly confirm the diagnosis. In case of our patient, clinical examination, radiography of the lungs, ultrasound of both breasts, armpits, abdomen, and small pelvis were performed as a part of preoperational preparation.

Sadov et al. (5) have shown 20 years of practice in treating fibroadenoma mammae in cases of children of younger age. Treatment of these kinds of changes in breast involved the total extirpation of tumor. Final diagnosis was set based on pathohistological examination.

Maharaj et al. (6) have shown the case of a patient with giant fibroadenoma mammae that was extirpated from the breast through extremely small incision on breast that was sowed up with placing an intradermal stitch. Final diagnosis was set based on pathohistological examination. In certain cases where fibroadenoma completely pushes the breast tissue during a long period of time, mastectomy is preformed.

In our case, we did a complete extirpation of tumor with maximal sparing of healthy breast tissue. Final diagnosis was set based on pathohistological examination. Prognosis after surgical treatment is good (8).

### Conclusion

Giant fibroadenoma mammae is a rare tumor in juvenile cases, especially in cases of children younger than 10 years of age. Certain diagnosis is set due to pathohistological verification. Extirpation of tumor achieves complete healing, although there were some cases of relapses. Fibroadenoma mammae is extremely rare and it almost never has malignant alteration.

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## JUVENILNI DŽINOVSKI FIBROADENOM DOJKE – PRIKAZ BOLESNIKA

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Fibroadenom dojke je mešoviti fibroepitelni benigni tumor dojke koji nastaje proliferacijom epitela i fibrovaskularne strome. Čini 7% svih nodularnih promena dojke. Najčešće se javljaju kod žena u periodu od 30 do 40 godina. Tumor se pojavljuje kao pojedinačna promena veličine 1-10cm, okruglog je ili ovalnog oblika. Njegova glavna odlika je da poseduje kapsulu od vezivnog tkiva koja ne dozvoljava nekontrolisano prodiranje ćelija tumora u okolno tkivo. U radu je prikazana bolesnica stara 9 godina sa tumoroznom promenom koja se nalazila u levoj dojci. Bolesnica navodi da je prvi put promenu primetila tri meseca pre javljanja lekaru. Bolesnica je adekvatno preoperativno pripremljena i operisana u uslovima opšte endotrahealne anestezije. Hirurška intervencija se sastojala u ekstirpaciji tumora do u zdravo tkivo. Juvenilni džinovski fibroadenom je raritet u kliničkoj praksi u ovom uzrastu. Lečenje je hirurško i sastoji se u potpunoj ekstirpaciji tumora. Opisani su i slučajevi gde je došlo do maligne alteracije tumora. *Acta Medica Medianae* 2010;49(4):49-51.

**Ključne reči:** fibroadenom, dojka, ekstirpacija