

## JUVENILE BREAST HYPERTROPHY

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### ABSTRACT

Juvenile breast hypertrophy or juvenile gigantomastia is a rare disease characterized with rapid and excessive growth of the breast during adolescence. Although the deformity is benign, it affects patients physically and psychologically. Surgical approach is the primary treatment option, but timing for the operation is highly debated. A twelve year-old girl who is assessed by our institution because of over-growth of breast was followed for three months with a diagnosis of juvenile breast hypertrophy. No growth was observed, therefore reduction mammoplasty was performed. There were no problems during recovery and during two years of follow-up, no recurrence occurred. The treatment plan for giant breast deformity in adolescents should be determined according to the clinical condition of the patient. The end of adolescence may be the best for surgical treatment, however, benefits of early intervention following an appropriate follow-up should be considered as well.

**Key words:** Juvenile gigantomastia, hypertrophy, breast

### JUVENİL MEME HİPERTROFİSİ

#### Özet

Juvenil meme hipertrofisi ya da juvenil jigantomasti, ergenlik döneminde, memenin hızlı ve aşırı büyümesiyle karakterize, nadir bir hastalıktır. İyi huylulu olmakla birlikte ortaya çıkan deformite, hastayı, fiziksel ve ruhsal yönden etkiler. Cerrahi yaklaşım başlıca tedavi seçeneđi olmakla birlikte zamanlaması tartışmalıdır. 12 yaşında, memelerde aşırı büyüme nedeniyle tarafımızca değerlendirilen kız çocuđu, juvenil meme hipertrofisi tanısıyla üç ay süreyle izlendi. Büyüme saptanmaması üzerine küçültme mammoplastisi uygulandı. İyileşme sorunsuzdu ve iki yıllık izlemede tekrarlamaya görülmedi. Ergenlik dönemi dev meme deformitesinde tedavi planı hastanın klinik durumuna göre belirlenmelidir. Cerrahi tedavi için ergenliđin sonlanması beklenebileceđi gibi, uygun izlem sonrası erken yaklaşımın yararı da gözönünde bulundurulmalıdır.

**Anahtar sözcükler:** Juvenil jigantomasti, hipertrofi, meme

### Case presentation

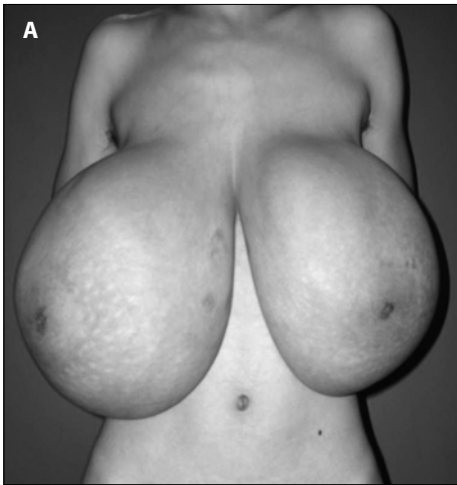
A girl with a history of overgrowth of the breast for six months was followed with a clinical and radiological juvenile breast hypertrophy diagnosis (Figure 1a, 1b, 1c). Development and hormonal values were in normal limits and no familial disposition was determined. There was no progression during three months; therefore a breast reduction surgery was planned after informing the patient and family about the possible complications and additional interventions that may be required in future. From the right side 2880 grams and from left side 2100 grams were removed and nipple areola was transferred to its new place as a graft. Increase in stromal and ductal proliferation, interstitial and periductal edema was found in histopathological examination (Figure 2). There was no problem during recovery. Maintenance of breast projection was reported and no progression was noted during 2 years follow-up (Figure 3a, 3b, 3c).

### Discussion

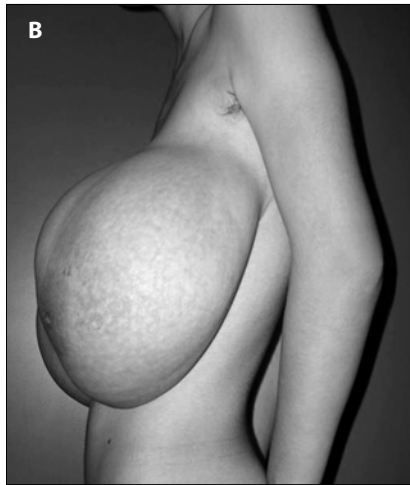
While diffuse breast hypertrophy during adolescence is named as juvenile or virginal hypertrophy, in advanced cases it is named as juvenile gigantomastia. The disease occurs sporadically, but there

were reports of familial cases too (1,2). As it is seen in our case history, a rapid 6 month growth phase is followed by a gradual slow growth period. When compared with other proliferative lesions, it is very rare. Fibroadenoma is the most frequent lesion type (75%) encountered during this period (3). These are well-defined, soft, mobile, and mostly solitary (75%) masses. Masses having a diameter larger than 5 cm and/or heavier than 500 grams are evaluated as 'giant fibroadenoma'. Phyllodes tumors are big fibroadenomas which have a stromal structure histologically. Physical examination and radiological results (USG and MRI) obtained from our case was in favor of diffuse growth.

Although abnormal response to hormonal stimulation was thought to be involved in formation of juvenile breast hypertrophy, the precise mechanism underlying the disease has not been discovered yet. Clinical and pathological findings show similarities with breast hypertrophy seen during pregnancy (gravid, idiopathic); yet triggering mechanisms are considered to be different. Serum estrogen, progesterone, prolactin, or gonadotrophin levels are normal as we have shown in our case and there were no increase in estrogen receptors (4). Psychological problems in relation to perception about



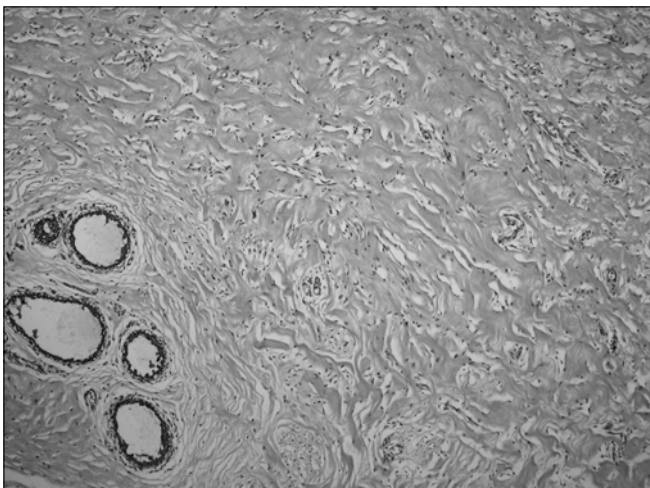
**Figure 1a.** Front view of case with juvenile breast hypertrophy.



**Figure 1b.** Left side view of case with juvenile breast hypertrophy.



**Figure 1c.** Right side view of case with juvenile breast hypertrophy.

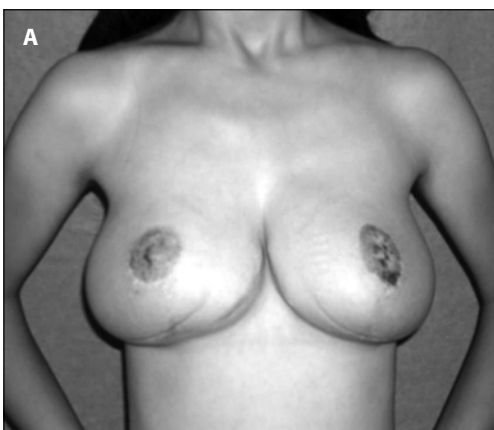


**Figure 2.** Vascular structure-like lesion in breast which is composed of narrow fissures anastomosing with each other breast ductus is shown in left. (Hematoxylen-Eosin)

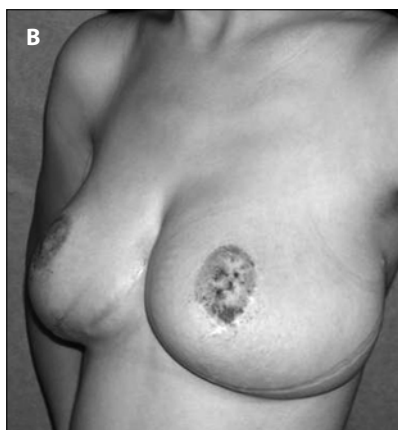
the growing body accompanies to the clinical breast-back-neck pain, postural deformity, and superficial venous ulcers.

Breast reduction operations are performed safely during adolescence (5,6). However, the timing of the surgical intervention to the growing breast tissue is controversial. The end of adolescence may be the best to avoid multiple operations (6-8). There was no evidence for the benefit of hormonal treatment. Decision for surgical intervention was made in our case after considering the extent of the deformity and psychosocial condition. When possible complications and gradual operations are taken into consideration, superiority of early or late restoration options through breast prosthesis after mastectomy over reduction mammoplasty is suspicious (2,9).

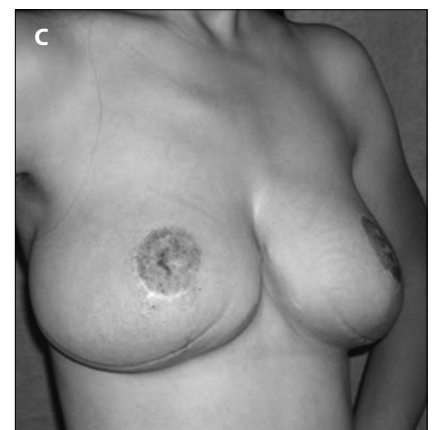
Juvenile breast hypertrophy is a rare disease resulting in severe physical and psychosocial problems. Treatment should be determined in accordance to the clinical condition of the patient. Reduction mammoplasty is a reliable treatment option after at least three months follow-up.



**Figure 3a.** Front view of case after 2 years follow-up.



**Figure 3b.** Left oblique view of case after 2 years follow-up.



**Figure 3c.** Right oblique view of case after 2 years follow-up.

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