Successful Treatment of Gynecomastia Grade III with Periareolar Excision Technique

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Abstract

As many surgical therapies have been introduced for Gynecomastia treatment, we are going to report a recent surgical technique in a male who has fatty glandular Gynecomastia grade III. In this procedure, gynecomastia will be treated by nipple repositioning with a periareolar excision. After six months no complications were detected and the patient was completely satisfied with his new IMF (inframamary fold) and NAC (nippleareolar complex). Respectfully, we suggest this surgical technique in patients with fatty glandular Gynecomastia grade III.

Introduction

A benign enlargement process in male breasts is Gynecomastia [1]. Gynecomastia has a different prevalence rate in any age. The first peak of Gynecomastia appearance is in neonatal period which is found in 60-90% of newborns. This high rate of prevalence is called transient palpable breast tissue which is because of the estrogen that passed through the placenta. Puberty is the second period for Gynecomastia prevalence peak which is between 4-69% that presents palpable breast tissue and enlargement [2-4]. The last peak of Gynecomastia prevalence is in elderly who are 50-80 [5,6]. Gynecomastia has been divided by two groups, asymptomatic and symptomatic. Asymptomatic Gynecomastia is defined as enlargement of the glandular tissue of the breast which is more common in older men [8-11]. First physical examination of asymptomatic Gynecomastia demonstrates that it has been presented for months or years before we discover it. In the histological examination, dilated ducts with periductal fibrosis, stromal hyalinization, and increased subareolar fat will be seen. In contrast, symptomatic Gynecomastia presents with recent onset of tenderness and pain in the breast area by the addition of infiltration of the periductal tissue with inflammatory cells, hyperplasia of the ductal epithelium and increased subareolar fat in pathological results [7,11-13]. It seems that the main etiology of Gynecomastia is an imbalance between estrogen actions due to androgen action at the breast tissue level [14]. Concerning of surgical treatment of Gynecomastia includes two main conditions: I. Male chest shape retraction and countering II. Diagnose of suspected breast lesion [15]. Webster classification is one of the first classifications of Gynecomastia which consists of three types as I. Glandular, II. Fatty glandular and III. Simple fatty categories, at the other hand [16]. There are two more classifications that we prefer to mention. In 1973 Simon et al. [17] suggested a 4-grade classification which is:

I: Small enlargement without skin excess
II: Moderate enlargement without skin excess
III: Moderate enlargement with minor skin excess
III: Marked enlargement with excess skin, mimicking female breast

The second classification suggested by Rohrich et al. [18] which is:
I. Minimal hypertrophy (<250 g) without ptosis
II. Moderate hypertrophy (250-500 g) without ptosis
III. Severe hypertrophy (>500 g) with grade I ptosis
III. Severe hypertrophy with grade II or grade III ptosis

Case Report

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The aim of this article is presenting a 23 year-old single man with Gynecomastia grade III which his inframammary fold (IMF) and nippleareola complex (NAC) was below the ideal position [19]. He was treated by a new surgical technique which has no complications after 6 months and the patient was completely satisfied with his new breasts.

Case Presentation

A 23 year-old single man was referred with Gynecomastia to the clinic affiliated to Department of Plastic and Reconstructive Surgery panzdah-e-khordad Hospital, Shahid beheshti University of Medical Sciences, Tehran, Iran in 2015. His past medical history was clear and he did not use any oral agents or medications plus, he declined smoking and drinking alcohol. In his laboratory results liver function tests (LFT), beta HCG and alpha-fetoprotein (AFP) were in normal range and nothing irregular was found in his hormone profile. His karyotype finding was 46 and XY and it was compatible with an apparently normal male from cytogenetic point of view. Severe glandular dominant and fatty glandular Gynecomastia was detected in his breast sonography. As it was mentioned before, his IMF and NAC were below than ideal position. On physical examination the other findings were presented by lateral chest wall and upper abdominal laxity and high skin redundancy. In this suggested surgical technique we will elevate the nipple areola complex on a thin dermoglandular flap which has 1 and 10 cm diameter and width respectively. After the procedure no complications such as seroma, necrosis, asymetry, malposition, fever, discoloration were seen and sensation of the site of the surgery was completely normal and as we mentioned before, the patient was satisfied with his new breasts.

Discussion

Surgical procedures of Gynecomastia treatment have had three options during the past decades including open excision, conventional liposuction alone or in combination with residual breast tissue excision and leaving the periareolar scar is still the most important complication of these procedures. In the combination technique, liposuction accompanied by residual breast tissue excision using either a periareolar incision or a sheet. Plus it is safe to say that the ideal procedure for treatment of predominantly fatty breasts is liposuction alone [20-24]. In patients with fibrous/glandular hyperplasia a reliquiae behind the NAC will be left [25]. Combination of periareolar liposuction with residual breast tissue removal has many obstacles. At the other hand there is a probability of thermal burn and nipple trauma at the site of the surgery [26]. In patients with principle augmentation skin and Gynecomastia grade III exisional technique is still incidental. For patients who have profit of subcutaneous mastectomy as liposuction will not greatly affect firm, subareolar tissue. The gland accessibility will be provides by keeping the scar in adequate spot in periareolar technique. A secondary complication that may have been occurred is changing nipple sensation, breast asymetry hypertrophic or keloid scarring and nipple necrosi [25-27]. Using just liposuction for patients who have mild to severe soft tissue and skin plusage, invocating nipple elevation is not suitable. In these cases, removing skin and soft tissue by exisional technique plus nipple areolar resizing and repositioning is required [26-28]. In this technique which has been chosen to decrease the post surgical scar with enormous width, we used a periareolar incision that limits the surgical scar just around the areola.

Technique

At the first step the areola circuitry and the distance between nipple and suprasternal notch should be evaluated. The areola circuitry should be estimated as twice more than the regular size which has been provided by a skin pinch that raises the skin and glandular tissue. On physical examination the other findings were presented by lateral chest wall and upper abdominal laxity and high skin redundancy. In this suggested surgical technique we will elevate the nipple areola complex on a thin dermoglandular flap which has 1 and 10 cm diameter and width respectively. After the procedure no complications such as seroma, necrosis, asymetry, malposition, fever, discoloration were seen and sensation of the site of the surgery was completely normal and as we mentioned before, the patient was satisfied with his new breasts.
Choosing a surgical technique is relevant to severe skin excess fat and glandular tissue volume, nipple position and patient and surgeon decision. As in severe cases the patient should accept the surgical scar [28]. Although, our patient with Gynecomastia grade III had severe skin and glandular tissue excess (Figure 2 and 3) and it was so critical to gain a delicate surgical scar at site and outcome with using liposuction only or free nipple graft, we decided to use this new technique to regenerate reduction mammoplasty and nipple repositioning. The areola’s concavity based on periareolar depression, is the main and only complication of this procedure that will be minimized by estimating of tissue excision adjustment and applying appropriate pressure to roll up the tissue which surrounds the NAC. The presented patient was completely satisfied with his new breast shape and nipple position while the breast symmetry, countering and size was acceptable (Figure 4). The function and physical outcome was satisfying although, the patient has gynecomastia grade III with severe breast ptosis. It is safe to say that, as far as this technique will provide such good results, considering other secondary procedures may be not needed.

References