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THE QUALITY OF LIFE IN THE SURGICAL TREATMENT OF GYNECOMASTIA

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Abstract:

Background: *Gynecomastia is the development of the men breast which results in serious physiological problems occurs at 13 to 14 years of age. The etiology of gyncomastia involves the imbalance between androgen and estrogen levels at the tissue of the breast. There are other several causes of gyncomastia including Klinefelter' s syndrome and hermaphroditism. The most common procedure performed for gynecomastia is subcutaneous mastectomy.*

Aim: *To assess the quality of life after surgical treatment of gynecomastia.*

Method: *The study is cross sectional that was conducted on males with gynecomastia and performed between April 2018 to June 2018 at King Fahad Hospital in Madinah. The quality f life was evaluated using the Short- Form 36-Item Health Survey (SF-36) questionnaire on following up patients in Endocrine and Plastic Surgery Clinics.*

Results: *The mean ±SD of age of participants was 26.2±2.7 years old, the most common etiology was puberal (96.9%). There were significant differences in general health (P-value=0.02), functional capacity (P-value=0.04), social aspects (P-value=0.003), pain (P-value=0.04), validity (P-value=0.005), and mental health (P-value=0.009).*

Conclusion: *Surgical treatment of gynecomastia has improved the quality of life of patients.*

Keywords: *Gynecomastia, SF-36, QOL, Breast growth.*

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INTRODUCTION:

Gynecomastia is defined as the growth of breast in men which results in huge physiological problems especially in adolescent stage [1]. The condition may be acute or chronic, either unilateral or bilateral, with or without tenderness [2].Gynecomastia is commonly present in males, its incidence is up to 8 cases in each 100000 men [3,4], and it was mentioned that the incidence ranged from 4% to 69% of palpable breast tissue [2]. Regarding the age when it occurs, it may develop as early as 10 years with a peak onset between 13 to 14 years of age [2].Other reports showed that the incidence was 70% in men aged 50-69 years old and it decreased to 50%-60% among adolescents and it is higher among neonates 60%-90% [5-8].The etiology of gyncomastia may return to the imbalance between decreased androgen and increased estrogen activities at the tissue of the breast [9]. The second leading cause is the use of drugs which trigger the conditions [10]. There are several secondary causes of gyncomastia that arise from broad uncommon pathological conditions such as Klinefelter's syndrome, hermaphroditism,chronic liver disease, congenital anorchia, testicular feminization, adrenal carcinoma, secondary hypogonadism, primary hypogonadism, testicular tumors, hyperthyroidism, renal disease and malnutrition [11-14].Diagnostic evaluation is required when the palpable mass is hard, fixed, unilateral, skin changes, peripheral to the nipple or associated with nipple discharge or presence of lymphdenopathy[15,16].The treatment of gynecomastia can be reversed with medication or even spontaneously, however it persists in 7.5% of patients [17]. The choice of treatment depends on investigation of the use of certain types of Medications and neoplasm tracking. In case of no spontaneous regression or the treatment with drugs failed, then surgical treatment is indicated [18-21].The most common procedure performed for gynecomastia is subcutaneous mastectomy, this procedure involves the removal of the glandular tissue [10].The patient who suffers gynecomastia should receive adequate information and should be informed and educated about the limitations of the procedure to ensure that his expectations of what can be achieved by surgery are realistic[22].The main adverse outcomes of the surgery include redundant skin, migration of the nipple, and unsightly scars [23].The quality of life of gynecomastia patients is greatly affected by their case [17]. Gynecomastia results in limitation in the activities of the daily life and emotional discomfort[24].Short Form 36-item health survey has been constructed to measure quality of life which provides detailed and sensitive assessment [25].The multicentric Short-Form 36 questionnaire was recongnized by WHO as an appropriate tool to assess the quality of life and it was validated in Brazil [26].The present study was conducted to assess the quality of life of males after performing the surgery.

SUBJECTS AND METHODS:

This study is cross sectional study which was conducted on males who were diagnosed suffering gynecomastia. The study was performed between April 2018 to June 2018 at King Fahad Hospital .The inclusion criteria were 19 years and older, diagnosis of bilateral gynecomastia and completion of clinical treatment, the exclusion criteria included breast neoplasm, presence of clinically decompensated etiology and known hypersensitivity to anesthetics or lidocaine. The study was performed using the Short-Form 36-Item Health Survey (SF-36) questionnaire to assess the quality of life on Following up patients in Endocrain and Plastic Surgery Clinics at King Fahad Hospital , the quality of life was evaluated before 1 week of surgery and after 6 months of surgery. Descriptive analysis was performed with Wilcoxon's nonparametric test using the pre- and postoperative scores (at 6 months) of the eight SF- 36 domains. P-value<0.05 was statistically significant.

RESULTS:

The present study included 50 males, the range participants'age was 19- 53 years old, with a mean ± SD age of 26.2 ±7.8 years old. The range of BMI of males was 22-28.8Kg/m^2 with a mean ± SD of 26.4±4.2 Kg/m^2. Regarding educational level, there were 11(22.8%) had primary education, 17(34.3%) had secondary education and 21(42.9%) had university education. Time with gynecomastia ranged from 2-22 years with a mean of 18.3 years. The most common etiology of gnecomastia was puberal48(96.9%), followed by using of anabolic steroids 1(2.5%) then Klinefelter syndrome and Hypophyseal adenoma, each represented 0.3%. The data collected from the eight domains of SF-36 were analyzed. The quality of life was assessed before and after surgery, there were significances in quality of life regarding different aspects including; general health (SfGH) (P-value=0.02), functional capacity (SfFC) (P-value=0.04), social aspect (SfSA) (P-value=0.003), pain domain (Sf Pain) (P-value=0.04), validity domain (Sf Vt) (P-value=0.005) and mental health (Sf MH) (P-value=0.009), detailed findings are shown in table1.

Table1: Values and significance of different domains regarding quality of life before and after the surgery

Data	Min-Max	Mean ± SD	P-value
SfGH-pre SfGH-post 6m	35-100 68-100	80.8±10.7 90.1±12.3	0.03
SfFC-pre SfFC-post 6m	52-100 73-100	89.9±9.9 97.8±6.5	0.04
SfLPA-pre SfLPA-post 6m	26-100 27-100	87.9±20.4 93.4±19.2	0.07
SfEA-pre SfEA-post 6m	36-100 36-100	82.8±24.6 85.9±22.8	0.09
SfSA-pre SfSA-post 6m	18-100 36-100	80.4±23.7 92.7±17.9	0.003
SfPain-pre SfPain-post 6m	46-100 45-100	85.3±16.5 77.2±12.2	0.04
SfVIT-pre SfVIT-post 6m	20-100 60-100	77.7±19.3 83.7±14.4	0.005
SfMH-pre SfMH-post 6m	39-100 70-100	76±14 83±10	0.009
ROS-pre ROS-post 6m	0-13 0-13	6.6±3.6 5.9±3.8	0.8

SfGH = general health,SfFC = functional capacity,SfLPA = limitations due tophysical aspects,SfEA = emotional aspects,SfSA = social aspects,
SfPain = limitations due topain, SfVIT = vitality,SfMH = mental health, ROS= Rosenberg questionnaire.

DISCUSSION:

In the current study, there were 50 participants who performed gynecomastia surgery. The most dominant etiology for gynecomastia was puberal (96.9%) and the range of gynecomastia time was 2-22 years. A previous study **[17]** showed that puberal etiology was the most common cause for gynecomastia (90.1%).It was reported that gynecomastia had significant negative impact on physiological aspects of patients such as mental health, social functions and well being **[1,17].**The survey used in this study (SF-36) enabled to assess both emotional and physical roles; the emotional roles include social aspects, mental health, validity and emotional aspects, whereas physical role included physical aspects, pain, general health and functional capacity. By assessing the quality of life in this study, it was found that the gynecomastia surgery positively affected the quality of life regarding general health (P-value=0.02), functional capacity (P-value=0.04), social aspect (P-value=0.003), mental health (P-value=0.009) and pain decreased(P-value=0.04).Our findings were in agreement with that reported in a previous study, where it was found that general health, functional capacity, social aspects, mental health and validity were significantly affected by performing the surgery, however in contrary to our study the pain wasn't affected by the surgery **[17].**In a review by Fagerlund et al **[27]**it was reported that high satisfaction levels were found among patients of gynecomastia who were treated surgically. A recent systemic review demonstrated that surgical treatment of gynecomastia was effective on several domains including validity, emotional, physical aspects and pain and there was a trend in the quality of life**[28].**The current study showed that the surgery had no influence on physical aspects (P-value=0.07) or emotional aspects (P-value=0.08), and this was in accordance with the study by Davanco et al **[17].**The present study had several limitations and strength points, limitations include no much comparisons were established as there were no previous studies on this subject except for one study, the data collected were few, the strength points include the nobility of the subject there was no previous Saudi study in this subject, using of SF-36 questionnaire which was accepted by WHO and validated in Brazil. Further studies are very recommended.

CONCLUSION:

Surgical treatment has positive impact on the patients'life and improves their quality of life.

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