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Use of Axillary Port for Liposuction of Gynecomastia

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Abstract:

In liposuction for gynecomastia different locations of port can beused. Among these are Central location Such as peri-areolar, intra-areolar and trans nipple areas[1]. Suction of sub areolar tissue is difficult because of proximity of port. The established trans-nipple techniques that have been used to treat gynecomastia are said to have relatively less patient satisfaction rate as they leave some visible scars or mild elevation over the nipple areola complex, resulting in aesthetically unsatisfactory results. Even the slightest elevation or smallest scar over nipple areola complex leave patients extremely self-conscious and in a dilemma of having a second intervention to get rid of that blemish[2].Additional access incisions remote from nipple have been recommended. So, peripheral port such as sub-mammary, anterior axillary line or mid-axillary line where the scar can also become visible revealing the evidence of past surgery. The aim of study was to evaluate the outcomes of liposuction through axillary port of gynecomastia. It is a retrospective study was conducted with 30 patients enrolled in the department of Plastic and Aesthetic surgery. Period of study was from October 2020 to October 2021. Among the study population (N=15) Patients were aged from 18 to 49 years. The mean age of the samples was 26.87+-SD and the maximum and minimum age of the study population were 46 and 18 years respectively. Around 1/5th (20 %) of the study population completed Secondary school, 1/5th (20%) completed higher secondary, three patients are studying at university, one patient completed MBBS graduation and one engineer and remaining four patients never completed secondary level. Six (40 %) were doing job at middle east & Europe as a worker, four patients were service holder and remaining five patients were students. Liposuction through an axillary incision is used to treat gynecomastia[3]. It avoids the large undermining between the skin and the muscular plane that frequently occurs with usual procedures. When gynecomastia is present, liposuction can be combined with an inferior periareolar incision for resection of the remaining glandular tissue. Liposuction provides a well-defined contour for the male breast. The Cannula can access all the areas of breast from the part in lower bearing area of axilla (Figure 1) The scar of this axillary port remains concealed under the cover of hair[4]. A concealed scar hides the evidence of past surgery & hence provides greater satisfaction to the patient then a visible scar.

Key word: Axillary port liposuction, Gynecomastia.

INTRODUCTION:

Gynecomastia is a Simple enlargement of the male breast. According to size of the breast, Gynecomastia divided into gradeIto grade IV. Two types of components in gynecomastia, Glandular and fatty tissue component. Whatever the grade of gynecomastia treatment option is mostly surgical. The modern treatment of gynecomastia is liposuction andgland excision.

In liposuction for gynecomastia through access port location are upper peri-areolar, lower peri-areolar, trans areolar, trans nipple. Suction of sub areolar fat is difficult due to close proximity of the port. So, additional port remote from nipple areolar complex have been recommended.

Previously sub mammary port was most popular. Some plastic surgeons avoid Sub mammary port due to more easily visible scar on anterior chest wall from the front view. One of the common site for a remote port is anterior axillary ford. Where the scar becomes also visible, revealing the evidence of pastsurgery, causing embarrassment to the patient. Personally, we shifted the liposuction port on the mid-axillary line at the level of the nipple. But the procedure for liposuction, the port side also became visible &revealing the surgery. In addition, liposuction more difficult from mid axillary line due to different plane with anterior chest wall. So, we shifted the port for liposuction to axilla at hair beaning area. A concealed scar on the axilla hides the evidence of past surgery and hence provides greater satisfaction to patient then a visible scar. (Figure 2)

Figure 1: Liposuction through axillary port

Figure 2: 3rd OPD grade 3 gynecomastia

MATERIALS AND METHODS:

A retrospective cross-sectional study was carried out in cosmetic surgery center during the period from October 2020 to Octobers 2021. A total of 15 Patients (N=15) over the period of one year. We enrolled in this study following the inclusive criteria. Data were collected using the predesigned Semi-structured questionnaire. All the patient underwent axillary port liposuction. Patients were followed-up at one month, three months, six month and one year. Four patients completed their one year follow-up, three patients completed their follow up at 6 month, further more eight patients completed their follow-up at 3 month after surgery. Most of the patients return to normal office work after 05 days of surgery. None of cases developed any complication. There was no keloid or hypertrophic scar at axilla. Scar were very minimum (Figure 3) which were hided within axillary hair. Verbal consent was obtained before recruiting the study population. The information was kept confidential only to be used for study purpose.

Figure 3: Axillary port 7thopd

Inclusion criteria
Patients who underwent gynecomastia surgery for improvement of self-confidence and improvement of body image.
Age 18 years to 50 yrs.

Exclusive criteria
Patient who under went gradeIgynecomastia surgery.
Patient who showed unwillingness to participate in this study.

Data analysis:
Random checks were done to ensure that data collection procedures were followed. Completed data forms were examined, amended, and processed for computer data input. Frequencies and percentages were used for descriptive analysis. The data analysis was performed using statistical package for the social sciences (SPSS) version 25.0

Anatomy and surgical technique:
Under general anesthesia and supine position, armabducted[5] at 90^0 to180^0 making it lie on the arm (Figure 4) splint or the arm is kept either fully abducted, keeping it by the side of the headwhich pushes

Figure 4: Patient supine position arm abducted at 90^0

the scapula and thus the axilla forward. The forward push of the axilla brings it into same plane as anterior chest wall. In this position the cannula can access all the areas of the breast from the port at the lower hair-bearing area of the axilla (Figure 5). During surgery care should be taken to prevent over stretching and thereby prevent brachial plexus injury. A Stab incision with blade no 15 is made at the hair bearing area of the axilla. Axilla pushes forward and tumescent fluid introduced all areas of breast with a cannula. Waited for 7-10 minutes for vasoconstriction effect of adrenaline and to dissolve fat with the help of normal saline. Then liposuction were performed radially according to pre-operative marking with 5mm cannula. After completion of liposuction a semi-circular incision was made on the upper peri-areolar or lower peri-areolar through which glandular tissue were removed. Checked and rechecked for any remaining extra fatty tissue or glandular tissue. Care should be taken for any uneven area after liposuction and excision of glandular tissue and at the same time hemostasis were done. Finally a drain tube introduce through axillary port into the chest wall from where liposuction was done. Bandage & belt applied over in the chest.

Figure 5: Drain at Axillary port

Figure 6: Before and 3 months after gynecomastia surgery. Auxiliary port scar not visible

RESULT:

Among the study population (N=15) Patients were aged from 18 to 49 years. The mean age of the samples was 26.87+-SD and the maximum and minimum age of the study population were 46 and 18 years respectively. Around 1/5 th(20 %) of the study population completed Secondary school, 1/5th (20%) completed higher secondary, three patients are studying at university, one patient completed MBBS graduation and one engineer and remaining four patients never completed secondary level. Six (40 %) were doing job at middle east & Europe as a worker, four patients were service holder and remaining five patients were students.

100% population were done their surgery to get rid of the social and phycological trauma. 80% of the study population underwent this study to improve body image and the rest of 20% studypopulation were keen on gynecomastia surgery to improve their self-confidence.

Among the study population three patients (20%) were gradeII, three patient (20%) were grade IV and remaining nine patients (60%) were grade III gynecomastia according to Rohrich's classification. None of study population were gradeIgynecomastia.

No complication was observed during post operative period and follow up at the three month, six month and one year after surgery were recorded. No hematoma, infection, keloid or hypertrophic scar were reported during the study period.

Table 1: Characteristics of Study Population (N=15)

Characteristies	Frequency	
Age	18-49 Mean age 26.87±SD Minimum Age 18 Maximum Age 46	
Education	Under SSC SSC HSC University student Graduation	4 3 3 3 2
Ocupation	Forign worker Service holder Student	6 4 5

DISCUSSION:

In the current study, all the study population underwent axillary port liposuction for gynecomastia. Gynecomastia is a common type of breast tissue hypertrophy in men. Surgical treatment is the best option. Traditionally liposuction and gland excision common procedure now a days. But in aesthetic surgery the above procedure evolving progressively for better cosmetic result. In liposuction for gynecomastia through access ports in center location such as peri-areolar, intra areolar, and trans nipple areas, suction of the sub areolar tissue is difficult due to close proximity to the port. For this reason additional access port remote from the central recommended. Initially submammary, anterior axillary or even mid axillary ports were used. For better satisfaction of the patients and past surgical scar these procedure most of the cases avoided by

the plastic surgeon. In addition chest, mid axillary[6] and anterior axillary areas are more prone to development of the keloid and hypertrophic scar which are aesthetically unexpectable to patients.

Compare to the mid axillary or anterior axillary port for liposuction through the axillary port more easy, same time consuming, less scar and no chance of keloid and hypertrophic scar development. Scar always concealed withing axilla not revealing the evidence of past surgery (Figure 6). In our technique incision for the port made on anterior inferior border of the axilla at the hair bearing area. With the patient supine position shoulder abducted at 90^0 keeping arm over splint or shoulder abducted 180^0 keeping both arm side of the neck. Care should be taken overstretching may injure brachial plexus.

CONCLUSION:

Axillary port can be used as an alternative to the commonly used inframammary port for liposuction of gynecomastia. In our study it shows that axillary port can be a better option since the scar is less visible and more acceptable to the patients.

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