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PROSTHETIC AUGMENTATION OF BREAST IN MALE TO FEMALE TRANS-GENDER

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Abstract :
Hormonal therapy and gender-confirming surgeries are the treatment of choice in appropriately selected male-to-female transsexuals. Breast enlargement greatly increases subjective feelings of femininity in transsexual females. There are only limited reports on augmentation mammoplasty (AM) in transsexual females and hardly any attention has been paid to the differences between the female mammary anatomy and its male counterpart. The basic anatomic and surgical considerations of AM for 20 male-to-female transsexuals who were operated on from 2010 to 2013 are reviewed and discussed. They include the differences between male and female anatomy and how to feminize the male chest, the results of hormonal therapy and proper timing of surgery, the choice of implant size and surgical approach, the results that may be expected after surgery, the expected complication and the implications of it on psychosocial outcome.

Keyword : Augmentation mammoplasty (AM), hormonal therapy (HT), xiphisternam (XS), midclavicular line (MCL), anterior axillary line (AAL), nipple areola complex (NAC), inframammary fold (IMF)

Introduction:

Hormonal therapy (HT) and gender confirming surgery are the treatments of choice for male to female transgender. Yet HT alone is often insufficient to produce adequate breast development and majority of them eventually seek Augmentation mammoplasty(AM)[7,10,12,13] in order to establish their feminine identity. However AM should not be undertaken before maximum achievable breast enlargement has occurred with hormones. The general rule of thumb is have 2 years of continuous HT before proceeding to augmentation[2]. AM is not all about providing big breasts; rather it's about establishing the natural shape and balance of it with the overall body contour.

Patients and methods:

Between 2010 and 2013, 20 cases of transsexual female underwent AM. They were aged between 23 and 37. Average duration of HT they had was 3 years. Selection was based on the Harris Benjamin's criteria[3]. All of them were subjected to detailed psychiatric assessment[1] prior to surgery. Preoperatively a thorough clinical assessment was conducted to determine the implant characteristics its dimensions the preferred route of access and the plane of placement of implant. Everything was discussed with the patients before choosing the appropriate one.

Surgical technique:

Markings were done preoperatively on the day of surgery, with patient standing and arms by the side. The midline is marked first from SSN to XS. The boundary of the existing breast tissue is then marked on all the four directions. Keeping this boundary as the reference the proposed boundary of augmented breast is then marked all around this utilizing the base diameter of the implant that was chosen. The inframammary incision line marked 1 cm above this boundary starting from the MCL to the AAL. The maximum length of incision we used is 4 cms. In order to have symmetry of both sides distance between SSN and upper pole of breast and the distance between NAC and IMF are measured equally on either side.

Figure 1 Showing the preoperative markings made Figure 2 shows the line of incision being made along the proposed IMF Figure 3 after placement of implants in the subglandular plane

Figure 4 after skin closure, final appearance.
Patient is given general anaesthesia, positioned supine and after tumescent infiltration incision placed along the proposed inframammary line starting from MCL to AAL. After just more than required pocket size creation along the subglandular plane is completed, heamostasis obtained then the implants were placed on both side and correctly positioned suprafascially. Trial stitches were made and patient is then changed to semirecombent position in order to check the shape, symmetry, level of NAC and the position of the newly formed IMF along the incision line on either side, to be equal. Once everything is confirmed, patient's position is again changed to supine and the incision line is closed in layers using monofilament absorbable sutures without any drain. Dressing is done with preoperatively decided autoclaved padded brassiere.
Post operatively bathing is allowed after 48 hours, discharged after 3 days. Broad spectrum antibiotic and analgesics were given for 1 week post operatively and trimming of subcuticular stitches were done on the 10th post operative day[8].

Case reports:
Case: 1
Patient a 25 years old transsexual female with an exomorphic bodily habitus having poor breast development after HT, augmented with 200cc implant

Figure 5 25 yr old trans-sexual female with exomorphic body habitus with poor breast development after HT

Figure 6 Post-op Frontal View Figure 7 Pre-op Profile View

Figure 8 Post-Op Profile View

Case: 2

An endomorphic bodily habitus patient with pectus excavatum abnormality having poor skin stretchability, 175cc implant inserted

Figure 9 Pre-op Frontal View Case: 3

Patient with fairy adequate east development after HT needed augmentation. We proceed with larger 300cc implant in order to correct ptosis as well.

Figure 14 Post-op Frontal View

Results:
In all the 20 cases we operated, textured non anatomical highly cohesive low profile silicone gel implants of different size were used. The average size is 275ml. In all of them the preferred access of entry we used was the inframammary, and the preferred plane of placement is subglandular. The maximum follow up period was 3 years. More than 95% of them felt that they obtained their complete feminine feeling after breast augmentation and more than 75% had the self confidence to overcome their sexual inhibitions[4,6]

Complications:
Following table shows the complications[5,9] that we encountered in our series and the methods by which they were managed.

nature	%	Overcome by
Hematoma	3-6	Seen in the immediate PO period Mild - needed no evacuation
Infection	3	One cases had severe infection with implant exposure requiring implant exit & redo surgery
Altered sensation of breast	15	lower half, resolved completely after 3 to 4 months
Keloid	3	One case had keloid, managed conservatively
Capsular contracture		Textured implants and post operative exercises in all cases. Hence none seen
Implant rupture		None seen
Wrinkling		None seen

Discussion:

Sex reassignment surgery in male to female transgender is always done in the following order, first the external genitalia conversion followed by breast augmentation procedure and finally by other feminizing body contouring surgeries. Breast augmentation among all is the one that greatly establish their feminine identity. However for breast augmentation to be successful, proper timing of the surgery as well as careful preoperative planning is essential. Hormonal therapy in spite of producing inadequate breast enlargement as it is seen in our cases must be continued for at least a period of 2 years before proceeding to breast augmentation. Because whatever the amount of breast enlargement is obtained by hormonal therapy, will be helpful in enhancing the overall shape of augmented breast especially for subglandular placement of implants. In general low profile implants are used because the amount of skin stretch ability will be less compared to normal female persons. Proper preoperative planning on an individual basis is very important in order to decide about the suitable implant, the route of placement as well as the plane of placement. This takes into account the shape of the chest wall, amount of existing glandular element, the skin stretch ability and its characteristics.

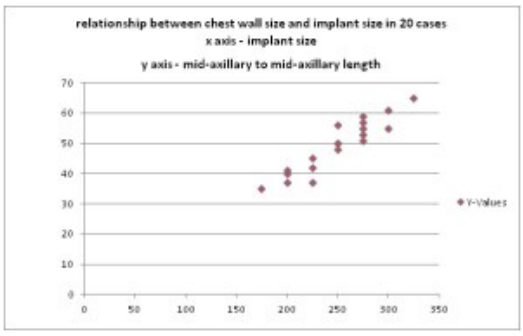

Table 1 Showing the relationship between the width of the chest wall and size of the implant chosen in our study

Meticulous dissection with careful attention towards obtaining perfect haemostasis, the adequacy of the pocket creation, accurate placement of the implant, and obtaining symmetry on both sides and perfect layered skin closure were all secrets behind a successful outcome[11]. The resultant shape and size of the augmented breast should fit exactly into the overall body contour.

Conclusion:

Hormonal therapy should always precede breast augmentation for all cases of transsexual female opting for breast augmentation. Augmented breast should look natural and aesthetically pleasing to become successful. A successfully augmented breast in transsexual female greatly enhances the overall psycho social outcome in them.

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