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A RETROSPECTIVE EVALUATION OF LIPOSUCTION IN THE TREATMENT OF GYNAECOMASTIA

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SUMMARY : A retrospective study of 11 gynaecomastia patients was done to evaluate the efficacy of liposuction in its treatment. Seven patients had pseudogynaecomastia, where liposuction alone gave satisfactory results. Two patients were of mixed gynaecomastia type and in them excision of glandular tissue was required in addition to liposuction. One patient had true gynaecomastia in which excision of glandular tissue was done due to failed liposuction.

INTRODUCTION

Gynaecomastia is one of the common breast abnormalities needing surgery in male patients. They seek treatment more for cosmetic reasons rather than for pain or tenderness. Surgery when offered as a treatment can have immediate complications like haematoma, seroma formation, nipple necrosis and late post operative complications like prominent scars and nipple abnormalities. To reduce the incidence of complications, liposuction has been advocated as a mode of treatment.

PATIENTS AND METHODS

A retrospective study of all the cases who underwent treatment of gynaecomastia in the Department of Plastic Surgery of Kasturba Hospital, Manipal during the period, May 1995 to June 1998 was done. Liposuction was tried in 11 patients. The case records of these patients were reviewed for age, sex, site of lesion, grade of the disease and other associated conditions. Salient investigations and amount of fat removed by liposuction were noted (Table 1).

TABLE 1

CLINICAL FEATURES AND TREATMENT ADOPTED

Sl No.	Age	Side	Grade	Assoc. Features	Treatment	Volume Sucked Right (ml)	Left (ml)
1	29	R	I	Nil	liposuction	130	140
2.	26	Bil	I	Chronic active hepatitis	liposuction	110	100
3.	14	Bil	II	Sec. sexual characters not developed	liposuction + excisison	250	200
4.	20	Bil	IIB	Delayed puberty + micropenis & hypospadias	subcutaneous mastectomy	Failed liposuction	
5.	27	Bil	II	Nil	liposuction	200	210
6.	26	Bil	I	Nil	liposuction	100	90
7.	26	Bil	II	Nil	liposuction	350	250
8.	21	Bil	II	Nil	liposuction + excision	200	210
9.	28	Bil	II	Hepatitis & nephritis	liposuction	275	250
10.	28	Bil	I	Nil	liposuction	80	80

TABLE 2

CLINICAL CLASSIFICATION FOR GYNAECOMASTIA[1]

Grade	Description	No.of cases
I	Small, visible breast enlargement without skin redundancy.	4
II	Moderate breast enlargement without skin redundancy.	5
IIB	Moderate breast enlargement with skin redundancy.	1
III	Marked breast enlargement with marked skin redundancy.	Nil

TABLE 3

INVESTIGATIONS

Case No.	Secondary Sexual Characters	Ostradiol level (Normal range 2-50 pg/ml)	Testosterone (Normal range 2.8-8.2 ng/ml)
Case 3	not developed	14.7 pg/ml	1.2 ng/ml
Case 4	not developed	75.5 pg/ml	8.4 ng/ml

All the cases were graded based on the clinical classification proposed by Simon et al[1] in 1973 (Table 2). In those cases where secondary sexual characters had not developed, blood oestradiol and testosterone levels were done (Table 3).

Post operatively the patients were followed up for a period ranging from two months to three years. During follow up, the appearance and behaviour of the scar and patient's assessment of the result were noted.

RESULTS

All cases were done under general anaesthesia. In seven cases only liposuction with blunt cannula was done. In two cases of mixed gynaecomastia, excision of glandular tissue by intraareolar incision was done in addition to liposuction. In one case of true gynaecomastia, liposuction failed as there was mainly glandular enlargement with minimal fat. In the true gynaecomastia case serum estradiol level was very high (Table 3).

The amount of fat sucked from grade I cases was between 90 to 140 ml per breast and in grade II cases, it was between 200 to 350 ml per breast. No case required blood transfusion.

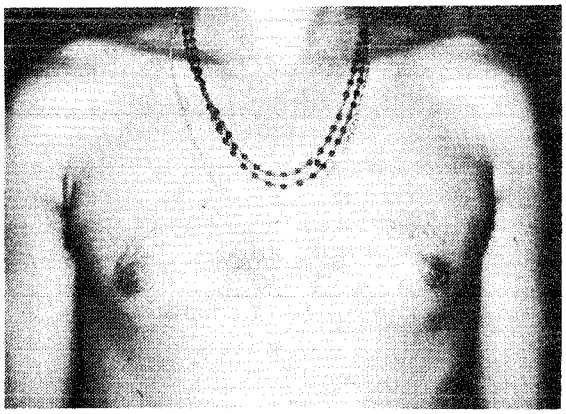
Patients were discharged after 48 hours and sutures were removed on the tenth post operative day. None of the patients had haematoma, seroma, breast contour abnormality, nipple abnormality, problems with sensation or scar hypertrophy. All cases, where liposuction was done were satisfied with the results obtained (Figs. 1 & 2).

DISCUSSION

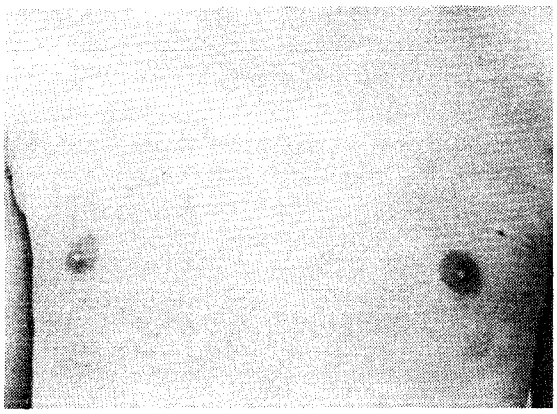
Surgical excision of gynaecomastia has been the traditional method of treatment. Various approaches have been described for the treatment of small, moderate and severe gynaecomastia.

In small and moderate gynaecomastia, the various approaches described for it's excision are:

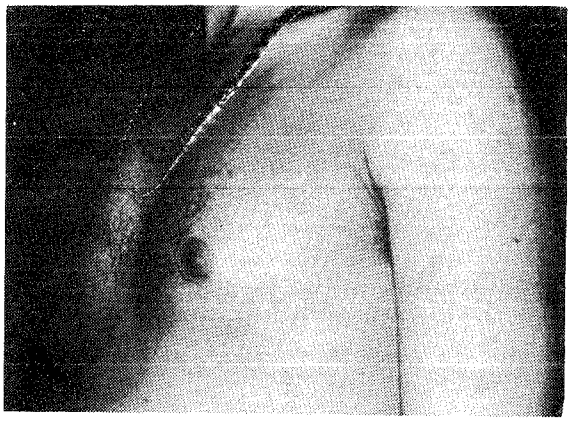
1) Semicircular intraareolar/periareolar incision[2], 2) transareolar incision[3] and 3) lateral oblique method[2]. For large sized gynaecomastia the incisions and techniques proposed are, 1) Circumareolar incision[4,5], 2) Periareolar incision extended in a radial fashion laterally[6], 3) The modified Hollander's technnique[2], which is similar to the lateral oblique method with a thin vertical dermis pedicle of the nipple folded into position, 4) The horizontal de-epithelialized flaps with areola is infolded after excision as in Strombeck's reduction mammoplasty[2], 5) The modified Pers-Bretteville and Jensen method[2], which consists of two horizontal incisions, one made at the site of the new nipple and the lower one according to the amount of skin to be removed. The blood circulation to the nipple is secure because of the vertical pedicle, 6) The concentric circle technique[7], which promotes excision of the redundant/excess skin in the horizontal and vertical directions. Depending on the "ground" distance, the outer circle is marked like a doughnut or an oval shape. A periareolar incision forms the inner circle. The upper half is de-epithelialized and in the lower half, a full thickness excision of skin is procured.



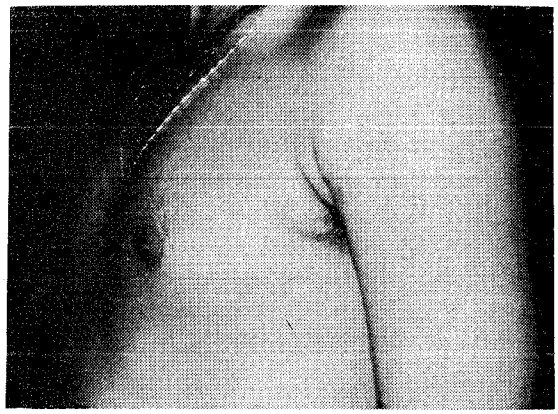
(Fig-1a)



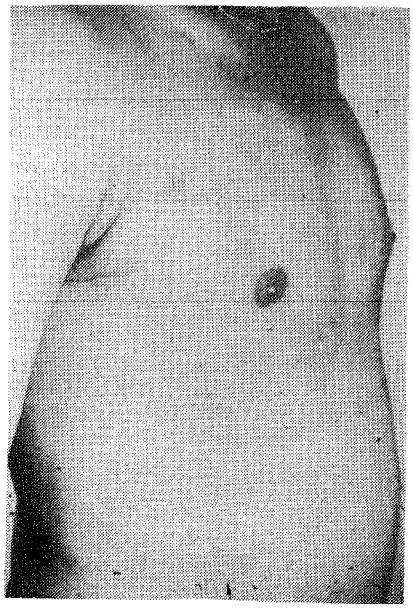
(Fig-2a)



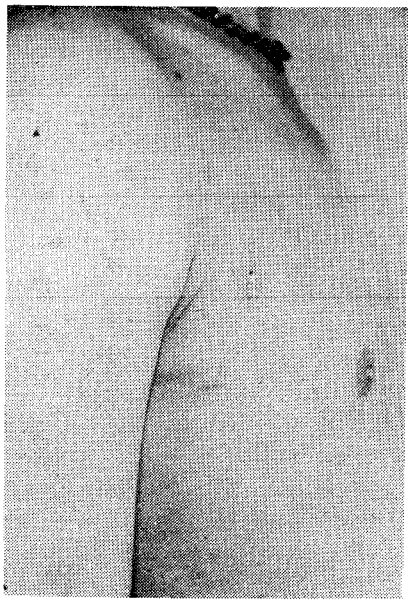
(Fig-1b)



(Fig-2b)



(Fig-1c)



(Fig-2c)

(Fig - 1a, 1b, 1c: Pre-operative photographs of case No.6.)

(Fig - 2a, 2b, 2c: Post-operative photographs of case No.6.)

A continuous horizontal suture aims to produce an everted suture line[7]. A total excision of excess skin, fat and gland with nipple replaced as a free graft has also been advocated[8].

Despite the choice of approaches there is a higher incidence of complications during surgical excision of gynaecomastia[9]. Peroperative risk of haemorrhage is high especially in body builders[10]. In the early post operative period, there may be temporary numbness, pain, haematoma and seroma formation and superficial nipple necrosis[7]. Late post operative complications are prominent scars, subcutaneous adhesion of nipple to underlying scar tissue, uneven adhesion of the nipple as in the lateral oblique approach[7]. The flaps may create a protruberance and hyperaesthesia after 3 months[5].

In 1980, the technique of liposuction for the treatment of gynaecomastia was introduced. The axillary and circumareolar approach were first described by Teimourian and Perlman[11]. Samdal et al[12]. were the pioneers in liposuction through an incision 3-4 cms. below the submammary fold. Liposuction is ideal for fat removal as in pseudogynaecomastia and may require sharp excision of glandular tissue in addition to liposuction in mixed gynaecomastia.

In the axillary approach, the septi in the tunnels act like a sponge to prevent depression and skin and nipple adherence to the muscular layer and reduces the chances of seroma, haematoma or lymphatic collection[12]. In all our cases, liposuction was done through a 1 cm. incision over the anterior axillary fold. Liposuction alone is suitable for diffuse fatty chest wall as well as for contouring the residual fat at the periphery[13]. The residual breast tissue after suction may be aspirated after blind morselization of the glandular tissue using either a Metz scissor, curette or arthroscopy cartilage remover as used in orthopaedics[14,15], or may be removed by surgical excision. In the circumareolar approach, excision of breast tissue and then the difficulty in passing the cannula through the subareolar tissue to reach all the quadrants may be avoided and also, it permits suction in two different directions. Contrary to the above sequence of excision and then liposuction, Samdal et al[17] prefer liposuction through submammary incision followed by excision.

With liposuction as the treatment of choice for gynaecomastia, the patient satisfaction is better and post operative complication rates are lower [12, 17]. The area of fat removal can be extended without enlarging the incision, so that the scar appears inconspicuous after healing. It helps the skin to retract so that skin excision is rarely necessary. This procedure may be done under local anaesthesia using a 'superwet' technique of injecting large amounts of lignocaine and adrenaline[17]. Liposuction for gynaecomastia is easy, requires short operating time and has a brief period of convalescence[18]. There is a better contour control and depression of skin and areolar-nipple complex is prevented.

CONCLUSION

Liposuction is an effective method of treatment of pseudogynaecomastia (due to excessive fat deposition) with minimal scarring and least complications. In mixed gynaecomastia, glandular tissue needs excision following liposuction. In true gynaecomastia (due to enlargement of glandular tissue), excision is required as liposuction is not effective.

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