

Subfascial Endoscopic Transaxillary Augmentation Mammoplasty

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ABSTRACT

Videoscopy for breast hypoplasia and glabellar frownlines has been used since 1996 in our private clinic. Breast augmentation with "S" shape incision for transaxillary access is utilized to introduce the implant, in a submuscular or subglandular, and recently (since october 1998) in a subfascial location. From August 1998 through January 1999, 62 patients underwent endoscopic surgeries, forty nine were submuscular, five subglandular and eight subfascial. McGhan® 410, anatomical biodimensional, 155 grams through 235 grams were used. We observed three cases of complications, two of them malpositioning (rotation), needing reoperation and 1 hematoma treated with drainage. Patient satisfaction was high, especially regarding the axillary incision. There have been no capsular contractions to date.

INTRODUCTION

Transaxillary breast augmentation has presented many advantages over other techniques^(5, 7, 12). The mainstay is the absence of scar on the breast.

The rationale for place the implant submuscularly, and recently subfascially, is to reduce the capsular contrac-

tion incidence in the late post-operative period and to avoid areolar sensation disturbances^(1, 9, 10, 13, 15).

The use of endoscopic magnifying lenses and video amplifies the images and gives the surgeon a better visualization of tissues and planes allowing more precise



Fig. 1 - A thirty one years old female patient, with hypoplastic breasts.

Fig. 1 - Paciente de 32 anos de idade, mamas hipoplásticas.



Fig. 2 - Same patient, six months after transaxillary videoendoscopic breast implant with asymmetry of the superior part of the left breast.

Fig. 2 - Mesma paciente com seis meses de pós-operatório, apresentando assimetria do pólo superior da mama esquerda.



Fig. 4 - Axillary scar four months after videoendoscopic surgery.

Fig. 4 - Cicatriz axilar após quatro meses da cirurgia videoendoscópica.

dissection and hemostasis while using only a small axillary incision^(3, 6, 9). This technique is not indicated for moderate and severe ptosis.

Breast endoscopic surgery was first described and used since 1987, for internal capsulotomy and to evaluate mammary implants^(2, 4, 8).

Johnson and Christ (1993) first described the videoendoscopic approach in transumbilical breast augmentation and in the same year Laurence Ho published his experience with transaxillary endoscopic augmentation⁽⁶⁾. In 1994, Price, Nahai and Bostwick published the endoscopic transaxillary subpectoral breast augmentation with good aesthetic results and no complications⁽¹¹⁾.



Fig. 3 - Same patient six months after transaxillary videoendoscopic breast implant reoperation to improve implant's rotation.

Fig. 3 - Mesma paciente com seis meses de pós-operatório de reoperação videoendoscópica para corrigir rotação da prótese.



Fig. 5 - Same patient one year after surgery.

Fig. 5 - Mesma paciente um ano após a cirurgia.



Fig. 6 – A 26 years old female patient with hypoplastic breast.
 Fig. 6 - Paciente de 26 anos de idade apresentando hipoplasia mamária.



Fig. 7 – Same patient six months after transaxillary videoendoscopic submuscular mammoplasty.
 Fig. 7 - Mesma paciente, com seis meses de pós-operatório de mamaplastia transaxilar videoendoscópica submuscular.



Fig. 8 – A 29 years old female patient with flaccidity and hypoplastic breast.
 Fig. 8 - Paciente de 29 anos de idade apresentando flacidez e hipoplasia mamária.

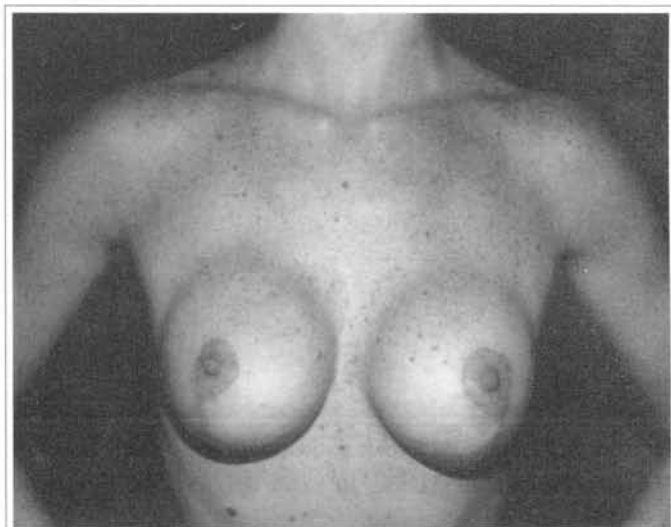


Fig. 9 – Same patient eight months after mastopexy and subglandular breast implant with visible borders at the superior part of the breast.
 Fig. 9 - Mesma paciente após ser submetida à mamaplastia em L associada a implante mamário subglandular; apresentando contorno nítido do bordo superior da prótese, com oito meses de pós-operatório.

MATERIAL AND METHODS

Sixty two patients underwent transaxillary endoscopic breast augmentation, from August 1996 through January 1999. 49 were located in the subpectoral plane, five were subglandular and eight were subfascial. The age varied from 15 to 48 years old. The textured, bi-dimensional, high cohesiveness silicon gel, McGhan® 410 implants, sizing 155 through 235 grams was used.

The inframammary sulcus was demarcated with the patient in the upright position and two cm below the neosulcus line, parallel to the original sulcus, another line was placed. The area to be undermined is delineated. These procedures were done under general anesthesia and the arms abducted to 90° with slight elevation of the dorsum. The incision was “S” shape marked in the axillary cavum, 3 cm long and one cm

in the posterior portion of the major pectoralis muscle border. This allows direct access to the retropectoral or prepectoral (subglandular) or subfascial plane. The dissection was performed utilizing videoendoscopy electrocautery and high frequency cautery, endoscopic scissors, hemostats, dissectors and endoretractors.

When subglandular access was utilized⁽³⁾, undermining was performed one cm below the original submammary sulcus and superiorly to the second intercostal space. When submuscular access^(13, 16) was chosen, the inferior and inferomedial insertion of the pectoralis muscle to the sternum and ribs was sectioned, respecting 1 cm of its osteous insertion to facilitate eventual bleeders hemostasis. This undermining was performed until 2 cm below the original submammary sulcus, because muscular contraction may bring the implant upward. When using subfascial

access (the preferred approach since October 1998), the dissection has to begin in the lateral border of the pectoralis muscle, accessing the subfascia with gentle movements to proceed the undermining upward to the second intercostal space and inferiorly to the level of the 5th and 6th intercostal space, where the junction of the pectoralis fascia and abdominus rectus and lateral oblique muscle is found. At this point the fascia is tender but resistant and from this point inferiorly, undermining shifts to a suprafascial or subglandular plane until it reaches one or two cm below the original submammary sulcus. Once undermining is completed and with the hemostasis under direct view, the implant is inserted. The implant is marked with methylene blue on its superolateral quadrant, which can be seen under endoscopy in order to avoid rotation. Closed drainage is maintained for 24 hours. Dressing

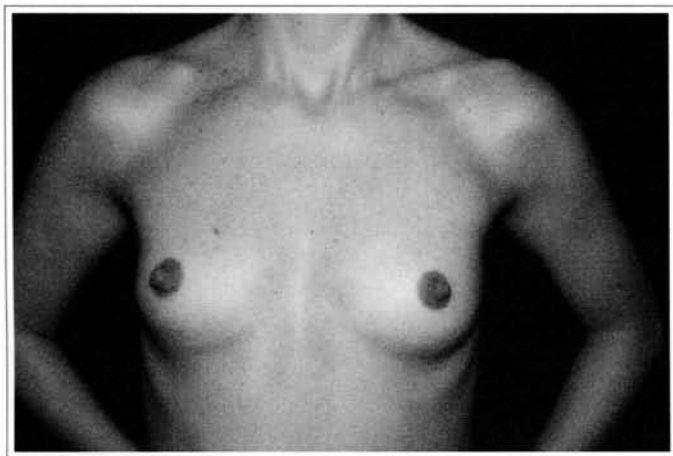


Fig. 10 - A 31 years old female patient with hypoplastic breast.
 Fig. 10 - Paciente de 31 anos de idade apresentando hipoplasia mamária.

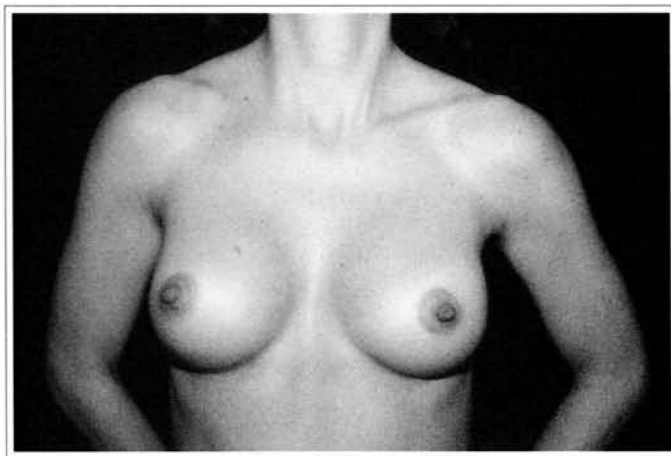


Fig. 11 - Same patient six months after videoendoscopic sub-fascial mammoplasty.
 Fig. 11 - Mesma paciente após seis meses de mamoplastia de aumento videoendoscópica transaxilar subfascial.



Fig. 12- Same patient of Fig. 10, oblique view, before surgery.
 Fig. 12 - Mesma paciente da Fig. 10, vista de semiperfil.

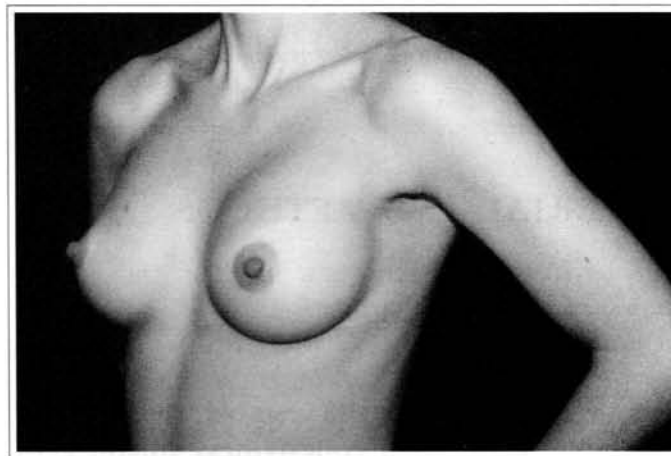


Fig. 13- Same patient of Fig. 10, oblique view, six months after surgery.
 Fig. 13 - Mesma paciente da Fig. 10, vista de semiperfil.

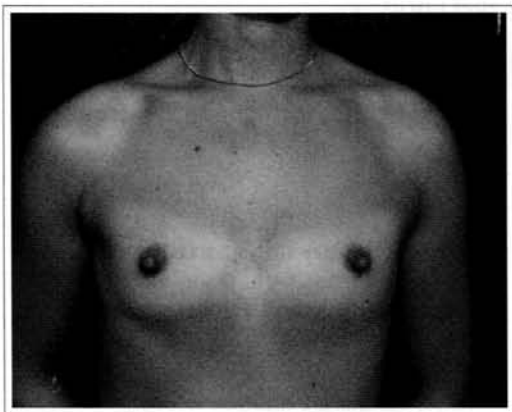


Fig. 14 - A 27 years old female patient with hypoplastic breast.

Fig. 14 - Paciente de 27 anos de idade apresentando hipoplasia mamária.

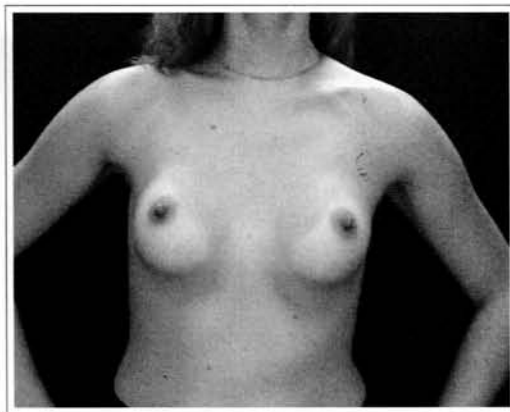


Fig. 15- Same patient six months after videoendoscopic sub-fascial mammoplasty.

Fig. 15 - Mesma paciente com seis meses de pós-operatório de mamaplastia de aumento transaxilar videoendoscópica subfascial.

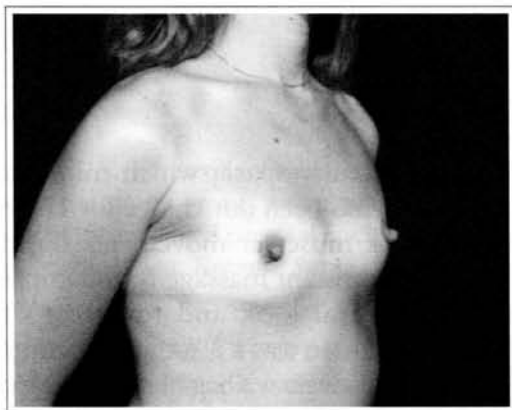


Fig. 16- Same patient of Fig. 14, oblique view, before surgery.

Fig. 16 - Mesma paciente em pré-operatório, vista de semiperfil.

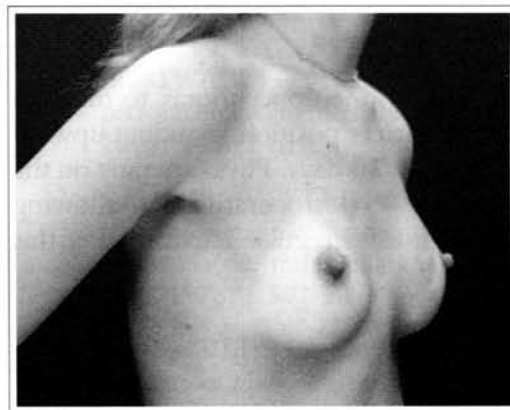


Fig. 17- Same patient of Fig. 14, oblique view, six months after surgery.

Fig. 17 - Mesma paciente em pós-operatório, vista de semiperfil.



Fig. 18- Same patient of Fig. 14, profile view, before surgery.

Fig. 18 - Mesma paciente em pré-operatório, vista de perfil.



Fig. 19- Same patient of Fig. 14, profile view, six months after surgery.

Fig. 19 - Mesma paciente em pós-operatório, vista de perfil.

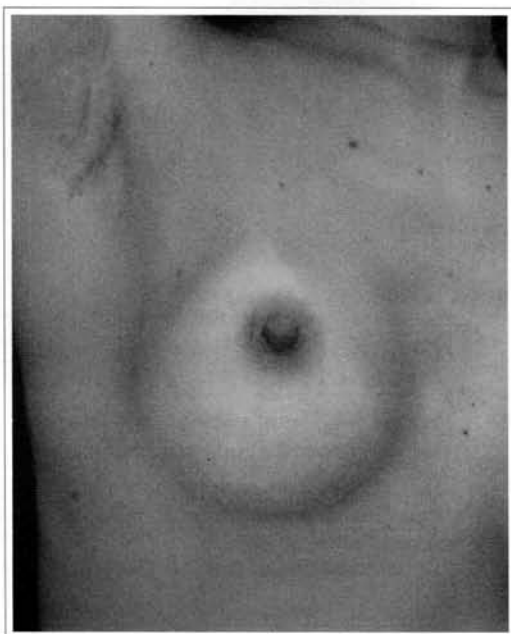


Fig. 20- Axillary scar six months after videoendoscopic transaxillary breast augmentation without scar at the mammary unit.

Fig. 20 - Cicatriz axilar com seis meses de pós-operatório e ausência de cicatriz na unidade mamária.

with an elastic band in the upper thorax to maintain the implant in the correct position, avoiding upward dislocation, is used for 30 days. Physiotherapy on the breast begins in the 7th postoperative day, allowing the patient to return to its regular activities after this date.

RESULTS

Complications are infrequent. Out of sixty two patients operated during a three years follow-up, only three complications were observed. They consisted of one case with hematoma, which was drained during ultrasonographic assistance and two patients with implants malpositioning which were reoperated through the same access, endoscopically, repositioning the implant (Figs. 1 and 3). There was one patient with axillary muscle contraction that resolved with physiotherapy. Ecchymosis and edema subside in a few weeks and patients returned to activities in 7 days.

Subfascial implants offer better contouring of the breast with a more natural appearance.

Personal satisfaction in all cases was excellent. The reasons for this relies on the absence of breast scars combined with almost imperceptible axillar scars and a much better shape of the breast at late postoperative period (Figs. 4 and 5).

COMMENTS

The submuscular space, which minimizes capsular contracture has been our choice for 17 years (Figs. 6 and 7). The muscular movements during activities maintain a constant massage to the implant and give a more natural look and texture to the breast. Nevertheless there was a 3% capsular contracture rate. Since four year ago we began using high cohesiveness breast implants and there was a striking reduction of contracture to zero. In one patient who was reoperated in the 6th postoperative month for repositioning of the implant, the capsule was sent for analysis and no silicone infiltration or leakage was revealed. This suggests that silicone leakage may be a reason for capsular contracture.

Based on these data and by observing that in some patients with submuscular implants the inferior pole of the breast was flattened during physical activity, we began to use the subfascial implant. In the area from the 2nd to the 5th and 6th intercostal space the undermining is carried just above the muscle fibers and just below the pectoral fascia. Inferiorly to these point the undermining moves to subglandular until one to two cm below the submammary sulcus. The subfascial implant has given a more natural look to the breast, avoiding flattening or change in shape of the breast as it occurs with submuscular implants. Another point is that the implant's edge is not marked on the breast

as it may occur with the subglandular location (Figs. 8 and 9), as in severe breast hypoplasia. This last option is maintained for those patients with enough breast tissue to hide the implants borders.

CONCLUSION

The videoendoscopic transaxillary mammoplasty seems to be a safe alternative to breast augmentation and gives better and more natural result, improving patients satisfaction, as far as scar, shape and low complication rate are concerned. Recently, subfascial access has been our choice for breast augmentation. The main reasons for this are that at the upper pole the implant looks like a submuscular implant without sharp demarcations while at the lower pole the breast looks like a subglandular implant without shape flattening as it occurs in submuscular implant. The final result is a more natural breast shape with the subfascial implant (Figs. 10 to 20).

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