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Editorial

Brazilian Butt Lift: Recent Guidelines to Avoid Complications

Masroor Hasan ¹

Although the name is Brazilian Butt Lift, this gluteal fat grafting procedure is being done all around the globe; and is one of the fastest growing aesthetic procedure in the United States. There are other forms of buttock lift surgery, as for example placement of silicone implants, but the fat grafting procedure is known to provide more natural looking results.

But, the Brazilian butt lift by gluteal fat injection may have higher risks than the other aesthetic surgical procedure and pulmonary fat embolism is one of the most devastating complications of this procedure that can be fatal. Despite the growing popularity of gluteal fat grafting, it does have a significantly higher mortality rate. In 2017, the death rate of approximately 1/3000 was the highest for any aesthetic procedure¹. The ASERF (Aesthetic Surgery Education and Research Foundation) declared gluteal fat grafting a high-risk treatment in 2017 and suggested specific technical details to reduce the danger of pulmonary fat embolism (PFE). After the death of their patients the surgeon claim that they had injected fat into the subcutaneous fat layer, but all autopsies of deceased BBL patients had these findings in common: 1) fat in the gluteal muscles; 2) fat beneath the muscles; 3) damage to the superior or inferior gluteal vein; 4) massive fat emboli in the heart and/or lungs¹.

No post-mortem examination has yet shown an instance of mortality with fat exclusively in the subcutaneous area, implying that surgeons injected fat into a deeper plane than anticipated. The cause of mortality is thought to be high pressure extravascular transplanted fat entering the circulation via tears in the major gluteal veins, followed by embolization of the heart and lungs. That is why every aesthetic surgeon performing BBLs must be careful and re-evaluate their techniques. The ASERF formed a Task Force to study this complication in 2017. The task force, therefore, offers these following suggestions²:

- 1) Stay as far away from the gluteal veins and sciatic nerve as possible. Fat should only be grafted into the superficial planes, with the subcutaneous space considered safest. If the aesthetic aim necessitates a greater amount of fat than can be injected in the subcutaneous layer, the surgeon should consider staging the treatment rather than injecting deep.
- 2) Concentrate on the location of the cannula tip during each stroke to ensure no unintentional deeper passes, especially in the medial portion of the buttock overlaying the essential structures.
- 3) Use access incisions in such a manner that each section of the buttock has a superficial trajectory; prevent deep angulation of the cannula; and palpate externally with the non-dominant hand to ensure the cannula tip stays superficial.
- 4) Avoid flexible cannulas and moveable Luer lock connections; instead, use apparatus that allows you to regulate the cannula. Vibrating injection cannulas may provide you more tactile input.
- 5) Injection should only be pushed while the cannula is in motion in order to avoid high pressure bolus injections.
- 6) The risk of death should be discussed with every prospective BBL patient.

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According to the results of this survey, fat injections into deep muscle should be avoided, as should utilizing cannulas smaller than 4 mm and directing the injection cannula downwards³. In last few years following publications and recommendations around the world, there has been an increased awareness regarding the dangers of Pulmonary Fat Embolism associated with Gluteal fat grafting. This has been reflected by a significant reduction in the incidence of any PFE which was 1 in 2492 compared with 1 in 1030 reported in 2017. But ongoing training on safe BBL in addition to awareness campaign needs to be continued worldwide, in order to further increase the safety of this procedure.

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Original Article

Breast Augmentation Using Implant Placement in Subfascial Pocket: Our Initial Experience

Md. Shariful Islam¹, Sayeed Ahmed Siddiky², Thrina Islam³

Abstract:

Introduction: Breast augmentation also called augmentation mammoplasty is used to increase breast size usually by using silicone implants. It involves placing breast implants under the breast tissue or chest muscle. Subfascial breast augmentation was pioneered by Dr. Ruth Graf in Brazil. There are studies which indicates that sub facial breast augmentation is better than the other techniques commonly used. Regular silicone breast implants are the most popularly used by the plastic surgeons, as they feel and look more real and natural.

Aim of the study: The aim of the study was to evaluate the outcome of the subfascial breast augmentation surgery with silicone implants.

Methods: It is a retrospective study that was conducted with 15 patients enrolled in the department of Plastic & Aesthetic surgery from January 2018 to January 2021.

Result: Among the study population (N=15), the mean age of the samples was 28.67±SD, and the maximum and the minimum age of the study population were 36 and 18 respectively. Four study population 4(26.67%) were actresses and models, One-fifth of the study population 3(20%) were housewives, one-fourth 4(26.67%) of the study population were jobholders, and four 4(26.67%) were students. 80% of the study population underwent this surgery to improve body image and the rest of 20% of the study population were keen on breast augmentation surgery to improve their self-confidence. No complication was observed during the postoperative period and follow-up at three month, six months and at 1 year.

Conclusion: Subfascial breast augmentation provides natural results with adequate implant coverage, especially in the upper pole. So, palpability and visibility is minimized; and animation movement of the implant can be avoided. The morbidity and pain associated with the procedure is minimal and the recovery is rapid.

Keywords: Peri-areolar Breast Augmentation, Breast enlargement

Introduction:

Breast augmentation, also known as augmentation mammoplasty, is a surgical

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procedure where breast implants are inserted beneath the breast tissue/chest muscle to improve breast size. Breast augmentation is a technique for most women to increase their confidence¹. There are various types of breast implants, such as gel implants and saline implants. They can be round or anatomical depending on the shape. Based on the profile they can be either low profile, medium or high profile. According to the surface, the implants are smooth, textured or micro textured². Reasons why women want breast implants includes boosting in their self-esteem by increasing the size of disproportionally small breasts, when one breast is larger than the other,

and women who had a mastectomy. Breast augmentation surgery involves surgically inserting an implant behind each breast³. Breast augmentation is a major positive step for most women. Studies have shown that breast implants can help boost self-esteem, body image, and marital harmony⁴. Subfascial augmentation is a method originally developed to minimize the risk of capsular contracture, and decrease the postoperative pain which is sometimes associated with sub-pectoral augmentation⁵. Subfascial breast augmentation was pioneered in Brazil by Dr. Ruth Graf in 1998 and currently, this procedure has earned interest in the aesthetic world⁶. Breast implant surgery was commenced in Bangladesh in September 2001⁷. In sub-glandular augmentation the implant is positioned between the Pectoralis Major and glandular tissue of the breast⁸. When the fan-shaped Pectoralis major muscle is divided inferiorly along the ribs, and the implant placed underneath, it is known as sub-pectoral implant⁹. There are some statistical differences between subfascial and subpectoral/subglandular implant placement in terms of breast shape and contour, capsular contracture, implant base and the appearance of folds. Studies show subfascial breast augmentation to be better than subglandular breast augmentation¹⁰. Recent development in technique and implant quality has contributed to more natural looking results¹¹. Silicone gel breast implants are preferred among plastic surgeons rather than saline implants due to better availability and cost difference¹². The most commonly employed incision for breast implant insertion is the infra-mammary incision. It can also be inserted through a peri-areolar incision. The incision is small and inconspicuous in this location¹³. More than 2 million women have received breast implants in the United States over the past 30 years. Nearly 20% of breast implants are used for reconstruction in breast cancer patients following mastectomy¹⁴. Some of the complications that may arise after breast augmentation, include breast pain, changes in the nipple and breast sensation, infection, capsular contracture, implant displacement, implant rupture and connective tissue disease¹⁵. Recently ALCL (Anaplastic Large Cell Lymphoma) has

been linked to breast implant surgery on very rare occasions. In the United States, women of all ages mostly 18 to 70 years do breast augmentation. The average patient age undergoing breast augmentation is 35 to 50 years¹⁶. Due to skepticism and unawareness breast augmentation was not very commonly performed in Bangladesh before. However, the popularity of breast implant surgery is increasing rapidly¹⁷. The aim of the study was to investigate the outcome of subfascial placement of breast implant for augmentation, rather than the more traditional submuscular or subglandular placement.

Methods:

A retrospective cross-sectional study was carried out in the Bangladesh Specialized Hospital and Cosmetic Surgery Centre Ltd during the period from January 2018 to January 2021. A total of 15 patients (N=15) over the period of three years were enrolled in this study following the inclusive criteria. Data were collected using the predesigned semi-structured questionnaire. All patients underwent sub-fascial breast augmentation surgery with the silicone implant. Patients were followed-up at one month, at the sixth month, at 1st year, at 2nd year and at 3rd year. Eight patients completed their three years follow-up, four patients completed their follow-up at 2nd year. Furthermore, one and two patients completed their one-year follow-up and at the three-month follow-up after surgery. All the patients recovered smoothly. Most of the patients return to normal office work within one week of surgery. None of the cases developed capsular contracture. There was no distortion of the implant. Verbal consent was taken before recruiting the study population. The information was kept confidential only to be used for the study purpose.

Inclusion criteria:

Patients who underwent breast augmentation surgery for aesthetic purposes.

Exclusion Criteria:

Patients who underwent reconstruction following mastectomy due to malignancy or prophylactic mastectomy.

Patients who showed unwillingness to participate

in the 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 & Surgical Technique:

Under general anesthesia and supine position, inframammary incision was used. After skin and subcutaneous tissue were divided, the fascia over the pectoralis major muscle was incised. Pectoral fascia is a layer of fibrous tissue over the pectoralis major muscle. The lower portion of the fascia is relatively thin, but gradually becomes thicker superiorly. The fascia can be readily raised from inframammary approach. Raising the fascia from periareolar incision is also possible. A combination of sharp and blunt dissection is used. Diathermy can also be used as required. Dissection is done up to 2nd intercostal space superiorly and medially 2 cm away from the midline, inferiorly 2 cm from the inframammary crease. The implant was then introduced. Closure is done by 2/0 vicryl for deeper tissues and 4/0 vicryl was used for intradermal skin closure. No drain tube was used. Patients were instructed to avoid lifting heavy weight for 4 to 6 weeks.

Results:

Among the study population (N=15) patients were aged from 18 to 40 years. The mean age of the samples was $28.67 \pm SD$, and the maximum and the minimum age of the study population were 40 and 18 respectively. Around two-fifths of the study population (40%) completed higher secondary levels, one patient (6.66%) completed secondary levels, four patients (26.7%) were graduates, one-fifth of the study population (20%) completed Master's degree and only one patient (6.66%) was a doctor. Four patients (26.67%) were actresses and models, one-fifth of the study population (20%) were housewives, one-fourth (26.67%) of the study population were job holders, and four patients (26.67%) were

students. 80% of the study population underwent this surgery to improve body image and the rest of 20% of the study population were keen on breast augmentation surgery to improve their self-confidence.

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

Characteristics	Frequency	
Age	18-40	
	Mean Age $28.67 \pm SD$	
	Minimum Age 18	
	Maximum Age 40	
Education	SSC	1(7%)
	HSC	6(40%)
	Graduate	4(26%)
	Masters	3(20%)
	MBBS	1(7%)
Occupation	Modelling and acting	4(26.67%)
	Job Holder	4(26.67%)
	Student	4(26.67%)
	Housewife	3(20%)
Distribution based on the indication	Improve body image	12(80%)
	Improve self-esteem	3(20%)
Breast size before BA	Mean	breast-size
	$33.20 \pm SD$	
	Minimum	32
	Maximum	36

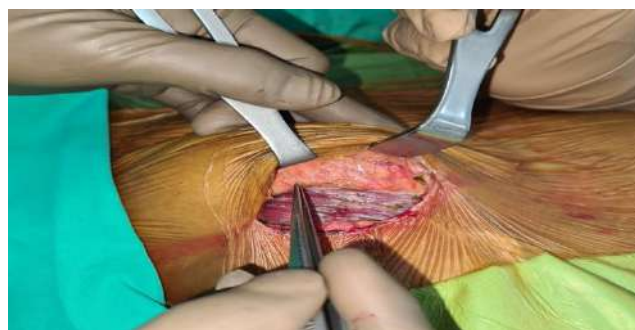


Fig 1: Subfascial pocket dissection and fibers of Pectoralis Major muscle (per-operative)

Mean breast size before breast augmentation was $33.20 \pm SD$ and the minimum breast size was 32 and the maximum breast size was 36. No

complication was observed during the postoperative period and follow-up at the one month, sixth month, 1st year, 2nd year and at 3rd year follow-up after surgery were recorded. No capsular; contracture, or post-operative wound infections were seen and no animation deformity was reported during the study period.



Fig 2: before and after one month of breast augmentation



Fig 3: before and after images following subfascial breast augmentation surgery after 6 months.

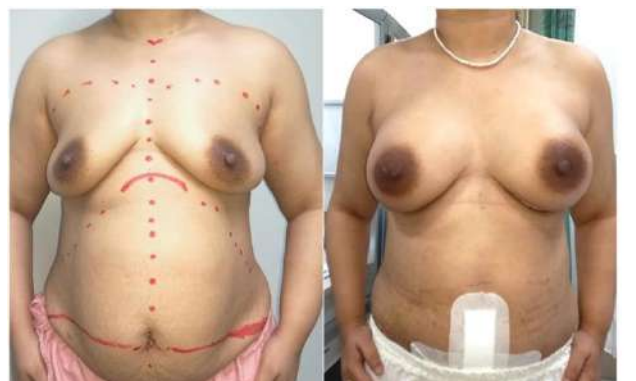


Fig 4: before and after images following subfascial breast augmentation surgery, done as part of "mommy makeover"

Discussion:

In the current study, all of the study population underwent subfascial breast augmentation surgery. None of the patients (N=15) developed

any complications during the post-operative period and during follow-up. The level of satisfaction was assessed six months after the procedure. During six months after surgery, breast shape continues to change and edema might cause potential volume distortion and asymmetry¹⁸.



Fig 5: Same patient as in Figure 4 in right oblique view.

Several studies show the sub-muscular placement of implants have animation problems whilst sub-glandular placement confers little coverage especially in small breasts^{19,20}. Subfascial placement helps prevent animation problems commonly seen after sub-muscular implant placement. Sub glandular placement has advantages of easier dissection and rapid recovery but it has disadvantages like rippling, upper pole step deformity, inadequate coverage and more prominence of the implant due to superficial placement.

Gould et. al. (2020) found that subfascial breast augmentation surgery has a lower risk of capsular contracture compared with sub-glandular and submuscular breast augmentation. Submuscular implant placement leads to more animation of the implant with muscle contraction during movement of the arm⁶. Different studies suggested that subfascial breast augmentation surgery has fewer complications in comparison with other breast augmentation surgery procedures. It has the advantage of avoiding division of the Pectoralis Major muscle and less post-operative pain due to less tissue dissection²¹. In the present study, only silicone gel implant was used. The latest generation of silicone gel implants and subfascial approaches has enhanced aesthetic outcomes following breast augmentation²².

Breast augmentation to enhance the shape and the size of the breasts is well established for restoring and rejuvenating femininity²³.

Breast augmentation is a well-known procedure and continues to be one of the most frequently performed aesthetic surgeries worldwide²⁴. The cardinal characteristic of subfascial breast augmentation is the creation of a strong support system for the implant's upper pole. Displacement in this position is avoided by placing the upper pole between muscle and fascia which constitutes a strong support system compared to sub-glandular approach²⁵.

Subfascial breast augmentation was started with a view to lessen the incidence of capsular contracture while at the same time reducing postoperative morbidity related with subpectoral augmentation²⁶. Another advantage of Subfascial breast augmentation surgery is the implant remains secured in place and a natural outcome is heightened since the skin and subcutaneous tissue in the upper third of the pocket are not directly in contact with the implant. In case of sub glandular placement, the implant is more prominent due to less coverage and direct contact of the implant with the subcutaneous tissue in the upper part of the breast. Therefore, subfascial breast augmentation technique reduces visibility of the edges of the implant on the skin, making them less prominent. The stronger support system that results from the subfascial placement of the implant prevents the implant's shape and position from altering. Subfascial breast augmentation has distinct benefits as it combines the advantages of the sub-glandular approach like more exact control of both breast shape and inframammary fold positions, more expeditious postoperative recovery, and lack of distortion²⁷. Disadvantages of the subpectoral approach such as malposition over time, the tendency for lateral displacement, increased morbidity in case of recovery from pain, and the inframammary fold's malposition have been considerably lessened by using the subfascial technique²⁸. The subfascial breast augmentation technique suggests enhanced long-term aesthetic results. This technique is flexible and may also be used in the study population requiring the removal and replacement of breast implants.

Conclusion:

Precision in surgical technique during breast implant surgery with silicone implants can decrease the risks of complication. Subfascial breast augmentation provides natural looking results, providing adequate implant coverage, thus preventing palpability and visibility of implants. Postoperative pain is less and implant animation during arm movement can be avoided. Overall patient and physician satisfaction are high. Thus subfascial breast augmentation with silicone implant has now become the preferred technique for breast augmentation for many plastic surgeons across the globe.

Recommendation:

Further research is needed to get robust data to conclude a better aesthetic outcome and study the populations' satisfaction with sub-fascial breast augmentation surgery with silicone implants.

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Original Article

Subungual Glomus Tumor- Clinical Presentation and Management

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Abstract:

Glomus tumor is an uncommon condition that accounts for about 1% of all soft tissue tumors in the body. Glomus tumor is well known for its unusual presentation and long-standing symptoms due to delay in diagnosis. Authors have presented the clinical behavior and treatment of 6 patients with subungual soft tissue mass. Following surgical excision, all patients were cured of symptoms and at the end of follow up, no recurrence occurred; post operative nail deformity was insignificant.

Keywords: Glomus tumor, Subungual, treatment.

Introduction:

Glomus tumor or glomangioma is an arteriovenous malformation (Hamartoma) surrounded by myoepithelial cells and nerve fibrils¹. These specialized organs (glomus body) commonly present beneath the nail beds of phalanges and is thought to be made for temperature regulation². Glomus tumor can rarely occur in stomach, intestines, tendons, bones and other viscera³.

Glomus tumor constitutes only 1% of all soft tissue tumors of body⁴. It is a benign tumor and unique for its triad of presentation-disproportionate pain, cold and touch sensitivity and paroxysm of attack⁵. Small size of the tumor and absence of diagnostic findings causes a long standing suffering to the patient⁶. Appropriate surgical excision ensures the cure⁷.

We have diagnosed 6 patients who had unremarkable chronic pain and hypersensitivity of finger tips for long duration.

Five had tumor in finger nail beds and one in the toe nail bed. All patients were diagnosed by clinical examination and plain x-ray. In two cases MRI was done. After excision, histopathology was done in all cases. They all showed features consistent with glomus tumor. All patients were relieved of symptoms after surgery.

Patients & Methods:

We studied 6 patients with subungual mass clinically diagnosed as glomus tumor. This study was conducted between September 2020 to August 2022. Operations were done in Monowara Sikder Medical College Hospitals of Shoriyotpur. Five females and one male with an average age of 33 years (range 21 to 56 years). Five patients had finger nail disease, of them 3 patients in middle finger and 2 patients in ring finger.

Interval between clinical onset and diagnosis average 2 years (range 6 months to 2 years). Clinically all patients had pain at the site, hypersensitivity to touch and exposure to cold.

On examination, increased convexity of nail bed was found in one patient, one had dark bluish spot at nail bed. One patient had subcutaneous swelling between nail and nail fold. Loves test Hildreth's test and cold exposure test was conducted in all patients.

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Loves test is positive when severe tenderness is elicited by pressing with the tip of a pin over the suspicious region of nail bed. Hildreth's test is positive when pin point tenderness is abolished upon application of a tourniquet on the affected limb.

X-ray study was done in all cases; 3 were normal, 1 had scalloping and narrowing of affected phalanx. MRI was done in 2 patients- one report suggested subungual mass but the other report was inconclusive.

All patients were operated by digital block. Nail avulsion done in all patients under a finger tourniquet using a glove's finger. Two larger tumors were visible after removal of nail plate which protruded above the nail bed but four were smaller lesions found after longitudinal incision of nail bed. The tumors were encapsulated and excised enmass, size were between 0.2 cm to 1.4 cm. Histopathology revealed glomus tumor in all 6 cases.

Nail plate was resutured to its bed by 4 /0 non absorbable suture, soft dressing applied for 7 days and limb kept in a sling. At 2 weeks sutures were removed. Full grown nail plate developed within 3-months time. The records which included clinical impression, operation record, and pathology report, imaging study, location and size and biopsy findings of all 6 patients are preserved.

Results:

All 6 patients were relieved of symptoms after surgery. Postoperative nail bed pain continued for 2 weeks to 3 weeks which eventually subsided. Nail deformity was evident in one patient. No recurrence occurred at the end of follow up.

Discussion:

Glomus tumor is a rare soft tissue tumor of body but not uncommon to hand surgeons⁸. Although small in size and benign in behavior and minimally affects the patients limb function, the pain is disproportionately high and patient frequently changes doctor to get relief of symptoms. Shugart et al⁹ in his large series have shown that many patients were treated for

functional disorder or neurosis for long periods.

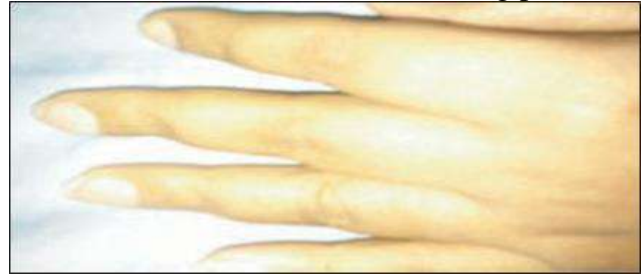


Fig 01: Clinically presented with curved middle finger

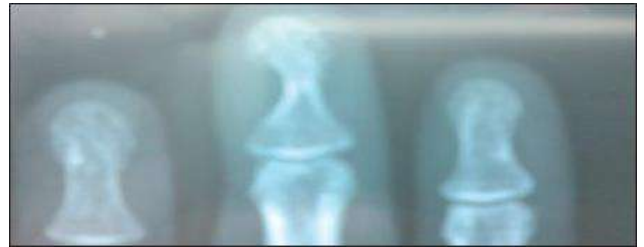


Fig 2: X-ray showing scalloping on the radial side of distal phalanx of middle finger.

King⁶ reported that pain starts long before the development of tumor. High index of suspicion, positive loves test¹⁰, x-ray findings can aid in diagnosis but high resolution MRI is confirmatory whereas conventional MRI is often inconclusive Histology shows multiple vascular channels called Sucquet -Hoyer¹¹ canal and comprised of a single layer of endothelial cells lined by their fibrous layer which are surrounded by numerous glomus cells. Glomus cells are modified myoepithelial cells with contractile properties. Nerve fibrils within the glomus body are thought to be the cause of pain¹².



Fig 3: MRI findings in case of toe glomus tumor

In our series most patients are of young age group with female predominance and middle finger nail

mostly affected. One patient had toe nail affection. Other less common sites of glomus tumor are head, cheek, eyelid, stomach, ligamentum patellae and viscera¹³.



Fig 4,5: Peroperative pictures showing subungual glomus tumor

Surgical excision is the only treatment⁸. Complete recovery after removal of an encapsulated mass is the rule. In this series all patients became symptom less after removal of the tumor. All specimens after surgery were studied histopathologically. Shugart et al⁹ describes vascular myoma, Haemangioma, Sclerosing angioma can mimic the feature of glomus tumor. No recurrence occurred till last date of follow up. Patric Maxwell³ reported incidence of recurrence is 25% due to multiple lesions.



Fig 6: Excised Glomus tumor mass



Fig 7: Reposition of nail plate

Recurrence can also occur due to inadequate excision. Nail deformity can be avoided by

repositioning of the avulsed nail which supports regeneration of healthy nail.

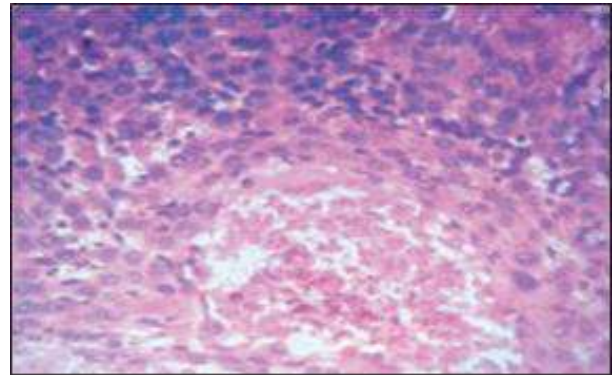


Fig 8: Microscopic findings

Conclusion:

Even though Glomus tumors are very rare, it should be suspected when there is disproportionate pain. Subungual glomus is more common and surgical excision of the lesion is the management of choice. Patients became satisfied even with mild deformity of nail plate after surgery.

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Original Article

Comparison of Outcome Between Frontalis Brow Suspension and Supramaximal Levator Resection in Ptosis with Poor Levator Function

Shah Md. Rajibul Islam¹, Golam Rabbani², Golam Haider³, Shah Md. Bulbul Islam⁴

Abstract:

Introduction: Evaluation of the surgical outcomes of frontalis brow suspension surgery and supra maximal levator resection in ptosis with poor levator function.

Methodology: A cross-sectional, observational study from 2011 to 2018 comprising 60 patients with ptosis with levator function were divided into two groups. Patients in group A underwent supra maximal levator resection and in group B underwent frontalis brow suspension with different suspension materials. All the patients were operated upon by a single surgeon. The post operative results were deducted as Excellent (difference of MRD I with fellow eye < 1mm), Good (difference of MRD I with fellow eye $1 \leq 2$ mm) and Poor (difference of MRD I with fellow eye ≥ 2 mm).

Results: Outcome of group A; 66.67% excellent, 26.67% good and 6.67% poor. On the other hand, 46.67% were excellent, 13.33% were good and 40% were poor in group B. Deterioration occurred in both groups at 24 months. In group A it was 6.66% and in group B it was 20%. Both the groups had some complications. 6.66% under correction in group A and 40% in group B. 6.6% overcorrection and 6.6% lid notching in group A; none in Group B. Exposure keratopathy occurred 13.33% in group A and 20% in group B. Stitch granuloma occurred in 13.33% in group B whereas none in group A. All the complications were dealt with. 2 patients from group A and 6 patients from group B needed revision surgery with excellent to good results. 6 patients from group B did not undergo revision surgery as the degree of asymmetry was acceptable to the patient party. Exposure keratopathy was successfully treated with lubricants and ointments. 02 patient from group B needed extended frost suture for exposure keratopathy. Inter group difference was insignificant ($p > 0.05$)

Conclusion: Correction of ptosis with poor levator function being challenging, surgeons opt different techniques. Frontalis brow suspension being the most preferred method. Supra maximal levator resection is a newer technique that negates the use of suspension material with good postoperative outcome

Keywords: Ptosis, poor levator function, frontalis brow suspension, supramaximal levator resection

Introduction:

A drooping lid covering a normal eye renders that eye useless, disfigures a face and causes psychological trauma. It is one of the commonest

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problems faced by an ophthalmologist.

In congenital ptosis the functional insufficiency of the muscular part of the levator is prevalent while in senile ptosis the dysfunction comes from the aponeurosis. Involutional disintegration in the aponeurosis is a cause of ptosis. This can consist of a thinning and laxity of the aponeurosis, or dehiscence or even disinsertion of the aponeurosis from the tarsus. A large percentage of senile ptosis cases are caused by levator aponeurotic degeneration. Congenital ptosis cases may also be caused by aponeurotic defect which are rare condition.¹ Depending on severity of ptosis and levator function various non surgical

and surgical procedures are recommended in the treatment of ptosis. Wire attached to Eyeglass frame or taping of upper lid are non surgical procedures but are not an effective long term solution for ptosis.

Congenital ptosis, unilateral and bilateral with poor to absent levator function, is most often repaired with a frontalis suspension procedure. Most surgeons prefer variations of the technique initially described by Payr in 1909² and reintroduced by Wright in 1912.³ This technique involves suspending the lid from the brow with fascia lata or suture material passed subcutaneously.

Several materials have been used as the suspensory suture and have been met with varying degrees of success.⁴ Wagner et al⁵ found a 40.5% failure rate either from ptosis recurrence or granuloma formation using a nylon polyfilament cable-type suture (Supramid Extra; S. Jackson, Inc, Washington, DC). Crawford found autogenous fascia lata to be the ideal suture material because of its lasting effect.⁶ Difficulties in obtaining sufficient amounts of fascia lata in children younger than 3 years of age as well as ophthalmic surgeons' reluctance to operate on the leg have led to the development of banked irradiated allogenic fascia lata obtained directly from tissue banks. This material has been found to be an excellent suture material of satisfactory tensile strength and easy to handle.² Frontalis suspension failures caused by recurrence, infection, or rejection have prompted investigation of maximum or "supra maximal" levator resections for severe unilateral or bilateral congenital ptosis.^{7,8} In this technique, a levator resection using a standard external approach is used. It is necessary to incise both the medial and lateral horns of the levator muscle and to sever the fascial attachments of Whitnall's ligament to the levator. This is required to isolate the necessary 25 mm to 30 mm of levator muscle that needs to be resected. It is generally agreed that resection of levator palpebrae superioris is the most physiological approach for treatment of ptosis.⁹ Cosmetic issues with eyelid height asymmetry may warrant revision surgery. Up to 2 mm of asymmetry is acceptable.^{10,11} Satisfactory results can be achieved by supra maximal levator

resection in unilateral congenital ptosis with poor levator function. Post operatively eyelid asymmetry of less than 1 mm (Excellent result) can be achieved in more than 80% cases. Specially in children less than 6 years old, from whom fascia lata cannot be obtained. Thus, the need for bilateral eyelid surgery and distant surgery to the leg can be prevented.¹²

Methods:

A cross sectional observational study was done among 60 patients according to selection criteria. They were divided into two groups randomly, each having 30 patients. Patients in group A underwent supra maximal levator resection and those in group B underwent frontalis brow suspension. Upper eyelid position and symmetry with fellow eye, pre operative and post operative MRD I, post-operative complications were evaluated and compared. The upper eyelid symmetry with fellow eye was graded excellent when there was less than 1 mm asymmetry with the fellow eye. It was graded as good when the asymmetry was within 1 - 2 mm. When the asymmetry was more than 2 mm, it was graded as poor.

Results:

A cross sectional observational study was done among 60 patients according to selection criteria. They were divided into two groups randomly, each having 30 patients. Patients in group A underwent supra maximal levator resection and those in group B underwent frontalis brow suspension. Upper eyelid position and symmetry with fellow eye, pre operative and post operative MRD I, post-operative complications were evaluated and compared. The upper eyelid symmetry with fellow eye was graded excellent when there was less than 1 mm asymmetry with the fellow eye. It was graded as good when the asymmetry was within 1 - 2 mm. When the asymmetry was more than 2 mm, it was graded as poor.

Table 1: Distribution of amount of ptosis in both groups

Amount of Ptosis	Group A	Group B
Mild	0	0
Moderate	5	3
Severe	10	12

Amount of ptosis: 1-2 mm = mild, 3-4 mm = moderate, >4 mm = severe

Table 2: Mean preoperative and postoperative palpebral fissure height in both the groups

Mean palpebral fissure height in mm	Group A	Group B
Preoperative	3.48	4.33
Postoperative	7.06	7.87

The mean preoperative MRD I in group A was -0.80 ± 1.58 mm; and in group B it was -1.27 ± 1.68 mm. The postoperative MRD I at 24 months in group A was 3.10 ± 0.52 mm and in group B it was 2.73 ± 0.81 .

Table 3: Preoperative and postoperative (at 24 months) mean MRD I in both groups

Mean MRD I in mm	Group A	Group B	P value
Preoperative	-0.80	-1.27	0.20
Postoperative	3.10	2.73	

P value >0.05

In group A 66.67% were excellent, 26.67% were good and 6.67% were poor. On the other hand, 46.67% were excellent, 13.33% were good and 40% were poor in group B. which was not significant. (P value > 0.05).

In group B, 40% resulted in poor outcome which

may be biased by the usage of three different materials. Gore tex was used in 14 patients (46.67%), Prolene in 10 patients (33.33%) and Fascia lata in 6 patients (20%). 100% excellent result was obtained in the patients with fascia lata. 57.14% excellent, 28.57% good and 14.25% poor resulted in Goretex (PTFE). 40% good and 60% poor resulted in prolene (polypropylene) usage.

The correction of ptosis deteriorated in both groups at 24 months. In group A it was 6.66% (02 patient) and in group B it was 20% (06 patients). Both the groups had some complications. Undercorrection was 6.66% in group A and 40% in group B. There was 6.6% overcorrection and 6.6% lid notching in group A. Group B showed no over correction or lid notching. Exposure keratopathy occurred 13.33% in group A and 20% in group B. Stitch granuloma occurred in 13.33% in group B; group A showed no granuloma formation. All the complications were dealt with. 2 patients from group A and 6 patients from group B needed revision surgery with excellent to good results. 6 patients from group B did not undergo revision surgery as the degree of asymmetry was acceptable to the patient party. Exposure keratopathy was successfully treated with lubricants and ointments. 02 patient from group B needed extended frost suture for exposure keratopathy.

Table 4: Postoperative result at 24 months in both the groups

Post operative result	Group A	Group B	P value
Poor	2	12	0.09
Good	8	4	
Excellent	20	14	

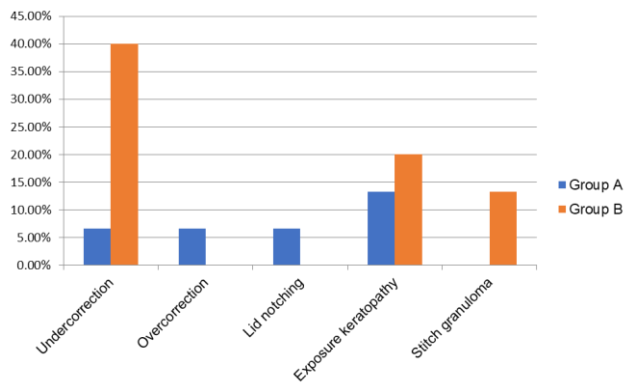


Fig 1: Postoperative complications in both group

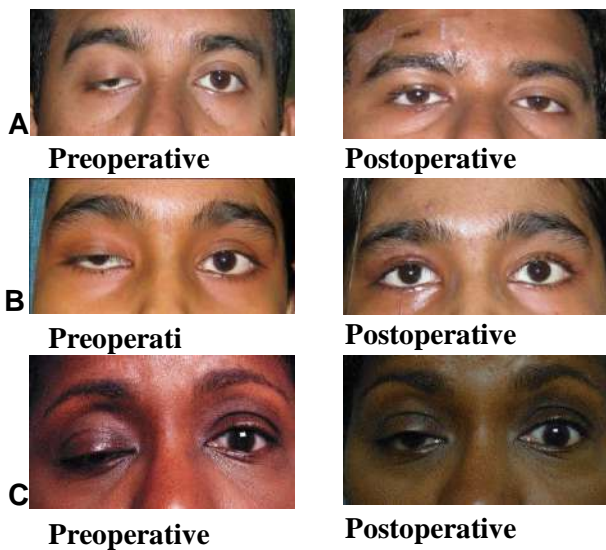


Fig 2: Post operative appearance following Frontalis Brow Suspension procedure.

- (A) Scar over the brow region, excellent symmetry
- (B) Excellent symmetry, swelling & scar over the brow region
- (C) Under correction

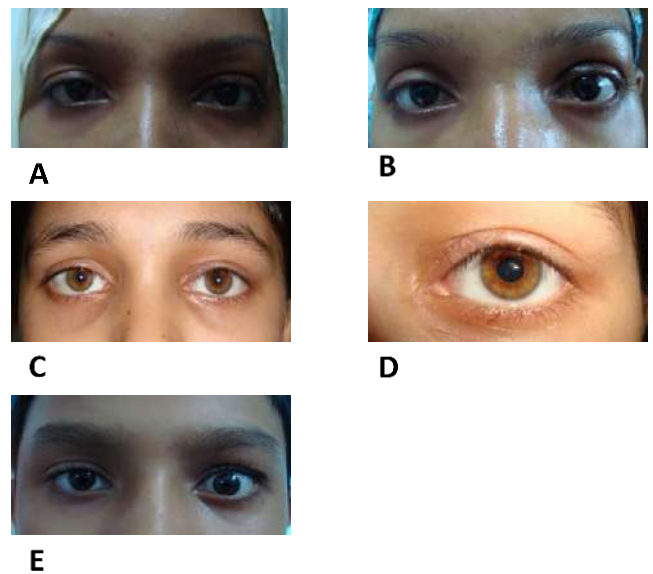


Fig 3: Complications of Ptosis Surgery

- A. Arrows showing stitch granuloma and lagophthalmos
- B. Arrow showing granuloma
- C. Arrow showing stitch exposure
- D. Arrow showing exposure keratopathy
- E. Arrow showing under correction
- F. Arrow showing over correction



Fig 4: Complications following Frontalis Brow Suspension Surgery

- A. Under correction & exposure of suspension material
- B. Granuloma formation
- C. Under correction

D. Scar mark at thigh

E. 3 ports from where fascia lata has been obtained

Discussion:

Christian E. Decock et al found a mean improvement of palpebral fissure height from 3.30 ± 0.70 to 7.10 ± 0.90 mm. They only evaluated the effect of supra maximal levator resection in severe ptosis with poor levator function.¹⁰ They did not evaluate the frontalis brow suspension procedure. Al-Mujaini A, Wali UK undertook a retrospective study of seven patients with severe ptosis with poor levator function. Their only observation was improvement of eyelid elevation.¹⁴ They did not quantify the improvement. A comparative study of levator resection with frontalis suspension in ptosis with poor levator function was done by Park DH et al. The average amount of ptosis was 2.1mm in levator resection patients which was 1.7mm postoperatively. And it was 4.0 mm in frontalis suspension patients; being 2.1mm postoperatively. They found an average improvement of ptosis approximately 1.0 mm in levator resection and 1.86 mm in frontalis suspension.¹³

Similar result was found in this study. the mean palpebral fissure height improved in both groups. Christian E. Decock et al didnt compare their results with that of frontalis brow suspension procedure. Al-Mujaini A, Wali UK only observed for post operative improvement without quantifying. Park DH, Choi WS, Yoon SH, Shim JS compared the two procedures on amount of pre and post operative ptosis.

In this study the improvement of MRD I postoperatively was evaluated. The MRD I improved from a mean -0.80 ± 1.58 mm to 3.10 ± 0.52 mm in group A and from a mean -1.23 ± 1.68 mm to 2.73 ± 0.81 mm in group B. The mean improvement was 0.76 ± 0.62 and 1.27 ± 0.85 mm in group A and group B respectively.

Epstein GA, Putterman AM, observed the results of super maximum levator resection in severe unilateral congenital ptosis. In their study, out of 16 patients, 08 underwent super maximum levator resection surgery and 08 patients underwent bilateral brow suspension with excision of the

contralateral normal levator. 06 (75%) out of 08 cases undergoing super maximum levator resection surgery achieved cosmetically acceptable results. 04 (50%) out of 08 patients undergoing bilateral brow suspension with excision of the normal levator had some amount of residual ptosis. They noticed overall better cosmesis in the super maximum levator resection group.⁸ Uwe Peter Press and Horst Hübner operated upon 44 cases and achieved satisfactory result (difference of less than 1 mm between both eyes) in 36 out of 44 cases (81%).¹² Mauriello JA, Wagner RS, Caputo AR, Natale B and Lister M undertook 32 maximal levator resection procedures upon 28 patients. 24 patients (85.71%) achieved excellent results. Two patients required reoperations and two other patients had under corrections, but did not want re-surgery.⁵ In their study, they did not define the term excellent. J Fonseka Jiménez and S. Hernandez Carmona performed supra maximal levator resection in 37 patients, 19 (51%) achieved symmetry, 2 patients (05%) had a difference of 1 mm and 16 patients (43%) had a final result of 2 mm asymmetry.¹¹ Rao Muhammad Rashad Qamar, Muhammad Younis Tahir, Abid Latif, Ejaz Latif achieved excellent results in 67.8% cases, good results in 17.85% and poor in 7.14% in supra maximal levator resection.¹⁶ 65% excellent (symmetry of within 1 mm with fellow eye), 27% fair and 8% poor results were observed by Hamid Mahmood using the supra maximal technique.²²

In this study 66.67% patients achieved excellent results (difference of less than 1 mm between both eyes) in group A and 46.67% achieved excellent results in group B. This study further quantified the post operative symmetry with the fellow eye into good (difference with fellow eye $1 \leq 2$ mm) and poor (difference with fellow eye ≥ 2 mm). In group A 26.67% achieved good and 6.67% poor; on the other hand, it was 13.33% and 40% respectively in group B. The results of group A are almost similar to the other studies.

In group B, 40% poor outcome may be due to using three different suspension materials (Goretex, Prolene and Fascia lata). Among the three, 100% excellent results were achieved in the cases where fascia lata was used. Goretex had 57.14% excellent, 28.57% good and 14.25% poor

results. Prolene was the most unsuccessful in this study. It had 40% good and 60% poor outcome with no excellent result.

A study of frontalis brow suspension surgery in ptosis with poor levator function was under taken by Deenstra W, Melis P, Kon M, Werker P. They compared unilateral suspension against bilateral suspension surgery with excision of the normal levator of the fellow eye. In 76% of their patients, they found an asymmetry of less than 0.5 mm. While in the unilateral group, they found it to be 35%.¹⁵

The difference of outcome may be due to our short follow up period. In this study, the follow up period was up to 24 months. Whereas the other studies had a follow up period of a few years. In this study, deterioration was also noticed in the 24 month follow up period. May be in long term follow up, more patients would have developed residual ptosis.

In a retrospective study by Jason A. Sokol and associates on a modified technique for frontalis brow suspension, evaluation of 171 procedures from 93 patients were done. 89 of 93 patients (95.7%) achieved excellent results (≤ 1 mm asymmetry in primary gaze). 06 patients (6.5%) had under correction. 2 patients (3.4%) required re-operation at 2- and 3-year time interval.¹⁷

The difference with this study was due to; their using a modified technique. This study opted the classical frontalis brow suspension procedure whereas in their study, lid crease incision was given and suspension material was introduced within the tarsal plate. In this study no lid crease incision was given in the frontalis suspension procedure; hence less cosmesis was achieved.

A comparative study among the various materials used for frontalis brow suspension procedures was carried out by Barry N. Wasserman, Derek T. Sprunger, Eugene M. Helveston. They performed a retrospective medical record analysis on 102 frontalis suspension procedures. Infection/granuloma formation occurred in 10.8% of all frontalis suspension procedures. 45.5% using PTFE (Goretex) required removal due to infection. Recurrence of ptosis was in 31.4% cases. Low incidence was found with autogenous fascia lata and PTFE (Goretex).¹⁸ Guy J Ben Simon and associates reviewed 99 patients who

underwent frontalis brow suspension surgery. There was an increase in MRD on an average of 1.1 mm after the operation. Ptosis recurrence was noticed in 42 cases (26%). PTFE (Goretex) achieved the lowest recurrence rate (15%). They noticed 2.4% over correction, 1.8% suture infection, 1.2% pyogenic granuloma and 1.2% suture exposure.¹⁹

In this study, granuloma occurred in 13.33% in group B (Frontalis brow suspension procedure group). Residual ptosis was present in 60% of the cases. 03 patients underwent revision surgery and 03 patients did not undergo revision. No over correction was noticed in this study; probably due to per operative table adjustment of lid height. Exposure keratopathy occurred in 20% (03 patients); probably due to early removal of frost suture and non-compliant patients.

Conclusion:

Surgical correction of ptosis is challenging. Different surgeons around the world adopt different techniques to manage different types of ptosis. Ptosis having poor levator function is one of the troublesome situation even for the most experienced surgeon. Most of the surgeons prefer frontalis brow suspension. Frontalis brow suspension with fascia lata is the gold standard due to its satisfactory post operative outcome without undercorrection in the long run that happens with the synthetic materials. But harvesting of fascia lata is often difficult and time consuming. It also needs to be done under general anaesthesia. Correcting ptosis having poor levator function using supra maximal levator resection is being preferred to negate those complications. They are being successful with comparison to the frontalis brow suspension procedure. So supra maximal levator resection may be a better offer to the patient, though a relatively difficult procedure to perform.

Limitation:

In group B different materials were used for suspension. It affected the result of the intergroup comparison.

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Original Article

Surgical Correction of Congenital Cleft Earlobe - Study of 20 Cases

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Abstract:

Background: Earlobes play a vital role in the overall aesthetics of the ear and face. There are several forms of congenital auricular abnormalities. Multiple procedures for repairing the cleft earlobe have been proposed. These procedures aim to restore the ear's natural look and shape for aesthetic and social purposes.

Objective: The aim of the study is to discuss the technique used in the department of Plastic and Aesthetic Surgery at Bangladesh Specialized Hospital, Dhaka, for the repair of cleft earlobe.

Methods: A prospective study was carried out on the procedure used to repair cleft ear lobe in our hospital. We present 20 patients with congenital left earlobes.

Result: Gross disparity of the two sides of the cleft was minimised while restoring the anatomical curve of the earlobe. Skin grafts were not used. Visible scar was minimal and almost imperceptible.

Conclusion: This simple technique has the advantage of being easy to perform and at the same time provide good aesthetic results.

Keywords: congenital, earlobe, cleft

Introduction:

Earlobes have a significant role in the aesthetics of the external auricle and face. Earlobes are naturally rounded and tapered to make wearing earrings easier for women. The ear lobule is considered a soft structure. It is composed of loose areola tissue and fat, and the ear lobes are pierced for social, religious, and cosmetic reasons. Congenital auricular anomalies are rather common and frequently affect the superior part of the auricle. The presence of an earlobe cleft causes visible cosmetic deformity. The cleft lobe is caused by a cleft between Hillock 6 and 1 during the embryonic phase, according to Hillock's hypothesis.

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The soft-tissue deficit, and circular cleft edges are all frequent characteristics. We present our technique to correct simple longitudinal cleft earlobe.

Material & Methods

Twenty patients with cleft earlobes were admitted to Plastic & Aesthetic Surgery department at Bangladesh Specialized Hospital, during the period between 2016 and 2020. In cases that were eligible for surgery, an informed consent was obtained before surgery. In this study, we included 20 cases of cleft earlobes, 14 with unilateral clefts and 06 with bilateral clefts. Their ages ranged from 6 months to 15 years. All of them were females.

Operative technique

Our method is based on the Randall-Tennison triangle flap repair reported for cleft lip. The primary idea of this therapy is tissue

rearrangement, which aids in the correction of soft tissue deficit. The technique is depicted diagrammatically in [Fig 1].

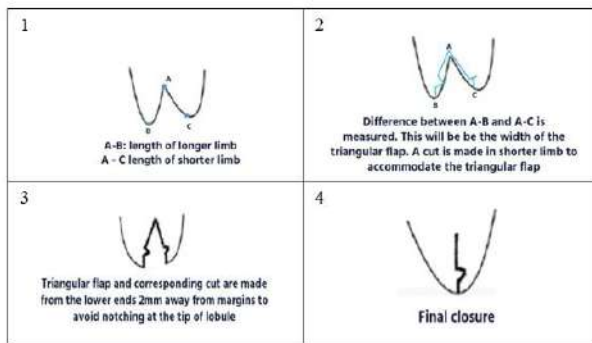


Fig 1: Diagrammatic representations of triangular flap

After preoperative marking we administered local anesthesia to the earlobe (lidocaine 1% and 0.3 ml of adrenaline with a concentration of 1 : 100 000); general anesthesia was used in 12 cases and local anesthesia in 8 cases. The length of the each limb of cleft is measured and the difference between the two cleft is noted. The difference equals the base of the triangular flap to be created on the longer limb. With minor tissue excision on the tip of the lobule, incisions are made to refresh the cleft edge. The triangular flap measured 2 mm from the lobule tip. A similar incision is done on the shorter limb. Full-thickness incisions are made in accordance with the markings. Sutures were given with proline 6-0 for both anterior and posterior skin surfaces and dressing applied.

The patients returned after 7 – 10 days for stitch removal and after 30 and 60 days for post operative follow-up. Cosmetic outcome and post operative complications we reassessed on the basis of clinical findings and photo/graphic documentation.



Fig 2: Pre operative & immediate post operative pictures of unilateral cleft ear lobe



Fig 3: Follow up pictures of another case before and after 3 months

Results

Of the 20 cases of cleft earlobes, 14 cases had unilateral clefts, 06 cases had bilateral clefts. There was no postoperative notching or scar contracture of the earlobes. There were no complications at 3 months follow-up. All the patients results were assessed by simple self-scoring system by patients and their parents. And all of them were happy with the outcome.

Conclusion

This simple technique of earlobe reconstruction can give consistent and aesthetically pleasing results.

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Case Report

Breast Reconstruction by Latissimus Dorsi Myocutaneous Flap and Silicone Implant in a Patient with Poland's Syndrome: A Case Report

Hasib Rahman¹, Enora Nilomi¹, Zahangir Alam Moni¹

Abstract:

Background: Poland's syndrome is an uncommon congenital abnormality characterized by unilateral lack of the pectoralis major muscle, ipsilateral brachysyndactyly, and is occasionally linked with other anterior chest wall deformities.

Case Report: A 28-year-old woman with marked hypoplasia of the right breast without any malformation of the right upper limb since birth was studied. Reconstruction was done with pedicled Latissimus Dorsi myocutaneous flap and silicone implant along with contralateral mastopexy to manage this case. The current literature on the topic is also reviewed.

Conclusion: The surgical method with combined autologous pedicled Latissimus Dorsi myocutaneous flap with implant is a reliable technique for breast reconstruction and can deliver an excellent outcome in long term in selected cases of Poland's syndrome.

Keywords: Poland's Syndrome, Breast reconstruction, Latissimus Dorsi flap, Breast implant.

Introduction:

Poland's syndrome was first described by Sir Alfred Poland in 1851 which is a rare congenital malformation of the chest wall and upper limb in the form of absence of the pectoralis muscles and ipsilateral hand abnormality with an incidence of 1 in 7000 to 100,000.¹ It has a gender predominance in men at a ratio of 3:1 with 60% to 75% affecting the right side². It usually presents as unilateral, bilateral anomalies also have been found. Most cases are sporadic but familial cases have been also reported.² Classically, Poland's syndrome is defined as hypoplasia or lack of the sternocostal head of the pectoralis major, which

results in the absence of the anterior axillary fold, subclavicular hollowing and a pathognomonic groove at the junction of the superior anterior axillary line and chest wall. However, recent definition is that Poland's syndrome comprises hypoplasia/absence of the pectoralis major with at least two of these minor criteria: hypoplasia or absence of the breast, absence of the nipple, absence of axillary hair, absence of adjacent muscles (e.g., latissimus dorsi, serratus anterior, external oblique, deltoid, infraspinatus, supraspinatus, and pectoralis minor), absence of costal cartilage and anterior ribs, absent subcutaneous tissue, axillary webbing, ipsilateral brachydactyly, brachysyndactyly or amelia.³

It is quite difficult to classify Poland's syndrome clinically because of the diversity in presentation. The general classification used was introduced by Foucras et al. and categorized the severity of disease as mild, moderate and severe.⁴ Breast

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anomalies among females are variable and range from mild hypoplasia to amastia. Poland's syndrome is involved in 14% of breast aplasia.

In the mild form, structural abnormalities may only be detected radiographically. These patients may be referred to the plastic surgeon for mild asymmetry, without any formal diagnosis. The mild variant of Poland's syndrome is more common than the classic full presentation with an incidence of 1 in 16,500 live births. The moderate variant of Poland's syndrome represents the classic form and is characterized by hypoplasia of breast parenchyma, high IMF, an underdeveloped and superiorly displaced NAC, with the absence of the anterior axillary fold. The severe variant of Poland's syndrome represents the most challenging to reconstruct and is characterized with a marked deformity of the chest wall with tight chest skin and axillary webbing which might require reconstruction of thoracic cage.

Case report

A twenty-eight years old married female, mother of one presented to Sheikh Hasina National Institute of Burn and Plastic Surgery with right hypoplastic breast for reconstruction. She was born with Poland's syndrome of moderate variant with absence of pectoralis major with hypoplastic breast which was more visualized during her adolescent period. She also had chest wall deformity (deficient 2nd, 3rd costal cartilage), loss of anterior axillary fold and groove at the junction of anterior axillary line and chest wall, deficient skin and soft tissue, ill-defined IMF, hypoplastic areola with NAC placed much superiorly in comparison with the left breast. She had no deformity of upper limb. She was within normal limits in height, weight and intelligence.

Patient had multiple abscesses under her right axilla followed by incision and drainage and later closure done at multiple sites at the age of 8

months which left her with widespread multiple scars around right axilla.



Fig 1: Young lady with Poland's Syndrome

Reconstruction of right hypoplastic breast was performed under general anaesthesia with pedicled Latissimus Dorsi (LD) myocutaneous flap and placement of implant under the muscle. Marking of desired breast footprint and optimal positioning of the flap were drawn preoperatively on the patient in standing position. Ipsilateral LD myocutaneous flap was raised in lateral position and delivered through a tunnel and inset done at upper outer quadrant of the breast.



Fig 2: Markings for LD Flap harvest on right side along with symmetrizing mastopexy on left side.

The LD muscle was harvested as large as possible and muscle edges were sutured with chest wall.

A round, textured silicone implant of 260cc was inserted in subcutaneous plane and covered by LD myocutaneous flap. 3-0 vicryl suture was used to fix the flap. The inferior margin of the implant was placed at the marked inframammary fold.



Figure 3: Perioperative picture of LD myocutaneous flap harvest

A small suction drain was placed alongside the implant.



Fig 4: Before and after LD flap with implant along with contralateral symmetrization surgery (14th POD).

She had grade 2 ptosis of left breast and her cup size was C. So, contralateral mastopexy was performed for symmetrization at the same setting. The patient had an uneventful postoperative course. Patient was on follow up and is highly satisfied with the results. Although we

recommended her further revision surgery for more natural and aesthetic outcome, she is not interested to go ahead with any further procedures.



Fig 5: Before and after surgery - same patient in right oblique view (8 months follow up)

Discussion

Poland's syndrome is a rare combination of chest wall, breast and hand deformities and selecting the appropriate treatment is challenging for reconstructive surgeons. Surgeons must provide a wide variety of treatment choices, and a mix of diverse surgical procedures is frequently appropriate for patients to obtain the desired outcome. Surgeons must provide a wide variety of treatment choices, and a mix of diverse surgical procedures is frequently appropriate for patients to obtain the desired outcome.² The repair may be done in one or two stages according to severity. Treatment option ranges from lipo transfer, autologous flap transfer, augmentation by implants with or without pre-expansion and free flaps depending on presentation. In case of severe variant of chest wall deformity or hand deformity further reconstruction is necessary.

Male patients with mild variety of Poland's syndrome can easily be managed with autologous lipo transfer. In children with mild to moderate forms of Poland's syndrome, which is limited to absence of the pectoralis muscles and breast hypoplasia, the operation should be postponed until after puberty at that time, an LD flap

transposition combined with breast augmentation by implant may be carried out in female patients.

LD flap is well established, reliable and most commonly used pedicle flap for breast reconstruction. Its close proximity to the chest wall and breast provides an advantage compared to more complex techniques, such as microsurgical free flap reconstructions and their potential risk for anastomosis related complications. It is a broad muscle and has a good axial rotation that covers a large area and can be used with or without skin paddle for reconstruction of small to moderate breasts. However, the muscle harvested with a skin paddle does not typically provide sufficient volume for large breast reconstruction. To achieve desired breast volume the LD flap is often used in combination with silicone implants which we used in this particular case as myocutaneous flap because of deficient skin and soft tissue.⁵ To obtain perfect nipple symmetry, the muscle was primarily secured to the chest wall for creating a stable base and adequate projection. The implant surface needs to be covered with muscle, which is sometimes not possible due to small muscle length. If the skin cover of an implant is not flexible enough, it will not allow stretching in a single stage and it will be necessary to implement a tissue expander first.

In some cases of Poland's syndrome with absent NAC, the nipple can be simultaneously reconstructed with a thoracodorsal artery perforator (TAP) flap in breast reconstruction by LD myocutaneous flap.⁶ In recent literatures, other techniques, e.g., laparoscopic reconstruction using the omentum flap technique or autologous fat injection, are also described.⁷ Sometimes contralateral mastopexy or reduction mammoplasty may be needed and often desired by the patients for symmetrization.⁶

Postoperative complications are very few following breast reconstructions by LD flap (mostly seroma), which are easy to manage.⁸ A sound and precise surgical technique may deliver very good and satisfactory outcome.

Conclusion

Due to the different grades of severity and the complex combination of different deformities, managing patients with Poland's syndrome can be extremely challenging for surgeons. The type of surgery depends on the extent of the malformation and individual patient preferences. A severely hypoplastic breast can benefit with LD muscle or myocutaneous flap along with a breast implant. This type of reconstructive surgery is recommended for aesthetic as well as psychosocial wellbeing of these type of patients.

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Case Report

Fat Cyst Excision Followed by Breast Implant as Management of Complications of Lipotransfer for Breast Augmentation: A Case Report

Paraskevas Kontoes¹

Abstract:

Autologous fat grafting is widely used in breast augmentation and reconstructive breast surgery. Coleman has detailed the fat grafting surgical procedure. After centrifugation and refining, the fat is melted through small parts using blunt infiltration cannulas. With each cannula removal, the grafted tissue is deposited in tiny aliquots. To obtain an aesthetically acceptable breast shape, fat should be stacked into multiple layers from the chest wall to the skin. However, if not conducted properly, autogenous lipotransfer can result in problems such as fat necrosis, calcification, the creation of encapsulated fatty lumps (cystic lesions), lymphadenopathy, deformity of breast contouring, hypersensitive breasts, and itchy nipples. Six months after autologous fat grafting for breast augmentation elsewhere, a 36-year-old female patient came with several palpable cystic lesions, disturbed breast contouring, asymmetry, heightened sensitivity, and discomfort upon palpation. The patient had ultrasound and MRI screening, which showed of several bilateral cysts in the breast tissue. The big lesions were surgically removed, and the specimens were sent for pathology and cytology evaluation. Breast augmentation with silicone implants was performed a few months after surgical excision of these lesions and after symptoms decreased. It was possible to obtain an aesthetically acceptable outcome while also relieving the patient's initial symptoms. Evidence Level: Level II: Evidence derived from well-designed controlled studies that were not randomised therapeutic Study.

Keywords: Autologous fat grafting, Breast Augmentation, cystic lesions, fat necrosis, complications of fat transfer/grafting.

Introduction:

Breast augmentation via autogenous lipotransfer may result in complications such as fat necrosis, calcification, the formation of encapsulated fatty masses (cystic lesions), infection, lymphadenopathy, disfigurement of breast contour, hypersensitive breasts, and itchy nipples if not performed correctly.

Coleman has detailed the fat grafting procedure. Several points must be remembered during the procedure in order to produce good outcomes.

Fat is harvested using a 10-ml syringe attached to a two-hole Coleman harvesting cannula. Following centrifugation and refining, blunt infiltration cannulas are inserted to inject fat. With each cannula movement fat is deposited in tiny aliquots. To obtain an aesthetically acceptable breast shape, fat should be injected into multiple layers from the chest wall to the skin. Blunt

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cannulas allow more dispersion of the grafted tissue in small aliquots and also reduce the chance of intravascular injection. Sharp needles for injection into the breast should be avoided. Shaping of the breasts can be accomplished by layering the fat into different levels until the desired contour is achieved. In most of the cases, the largest portion of the fat is infiltrated into the pectoralis major muscle, followed by the retro pectoral and pre pectoral spaces. Subcutaneous injection into the superficial planes can be used to shape the breast. Injection into the breast parenchyma should be minimized. However, it can be done to improve projection if required.

It is very important however that the execution of the technique should be done precisely. The end outcome can be influenced by both the right method of execution and the surgeon's expertise. The technique must ensure fatty tissue survival by limiting stress during harvesting and refining, as well as depositing the fatty in tiny aliquots rather than big clumps. The proportion of surface area of contact between the grafted fat and the recipient tissue, can be maximized by grafting fat in small aliquots. Fat necrosis and calcification in a later stage, can be avoided by increasing the fat survival rate, which can be achieved by the proximity of the transferred fat to blood supply areas at the recipient site.

If a big amount of fat is injected, some of the fat cells may be too distant from a blood supply. This can result in fat necrosis, which can result in the creation of liponecrotic cysts as well as lumps and calcifications. Therefore, transplanting fat in large clumps should be avoided.

Breast augmentation with the Coleman approach can be time-consuming, with the author claiming that harvesting and transferring 100 cc can take up to 2 hours. This means that for an average breast augmentation with fat transfer, the surgeon has to be patient and execute all stages of the technique

meticulously and correctly, since it might take up to 3-4 hours to finish.

Case Presentation

A 36 years old female patient presented at the office with multiple palpable cystic lesions in both breasts, disrupted breast contouring, asymmetry, hyper sensation, nipple itching and and pain during examination.

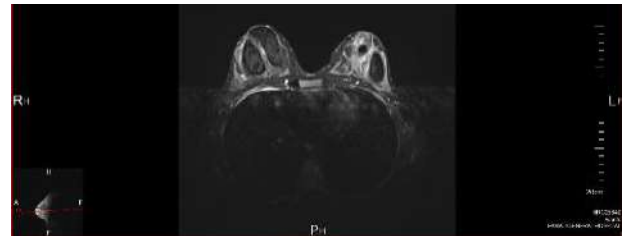


Fig 1: MRI Images

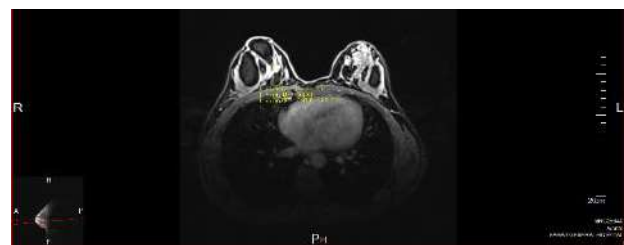


Fig 2: MRI Images

MRI Images (Fig.1 & 2) demonstrating multiple cysts on both breasts. In the right breast most are seen in the LOQ and some at UOQ. Largest lesions measuring 4.8 x 2.6cm. In the left breast most are seen at the LIQ and UIQ. The largest measuring 4.2 x1.8cm.

The patient had a lipotransfer procedure elsewhere for breast augmentation. There was no picture evidence to compare the state and look of the breast before the fat transfer was done. According to the patient, the lesions grew palpable and symptoms arose progressively over a 6-month period following the treatment .The first symptoms of pain and partial induration, having started 2 months after fat transfer.

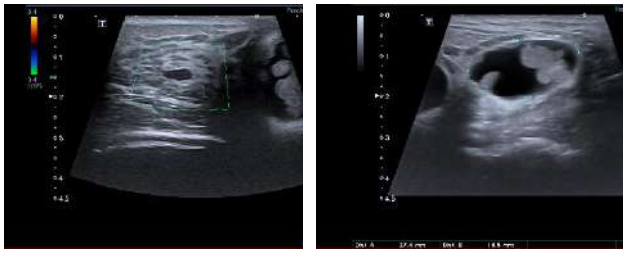


Fig 3: MRI Images

Fig 4: MRI Images

Ultra sound images (Fig.3 & 4) demonstrating multiple cysts on both breasts with internal soft tissue components. The largest lesion in the right breast at 7 o'clock measuring 4.7 x 2.5cm and in the left breast at 2 o'clock measuring 2.7 x 1.4cm.

After the initial clinical evaluation the patient was referred for an MRI screening (Fig.1 & 2). Both T1&T2 sequences showed multiple bilateral encapsulated oval fatty masses, the bigger one is found in the breast parenchyma, whereas the smaller one is found in the subcutaneous tissue. Consequent lymphadenopathy and diffuse parenchymal enhancement were also reported. An additional Ultra Sound screening (Fig.3 & 4) showed also large cystic lesions with internal soft tissue components. The woman was informed that a number of surgical treatments may be required to remove the lesions, relieve her discomfort, and restore the breast shape.

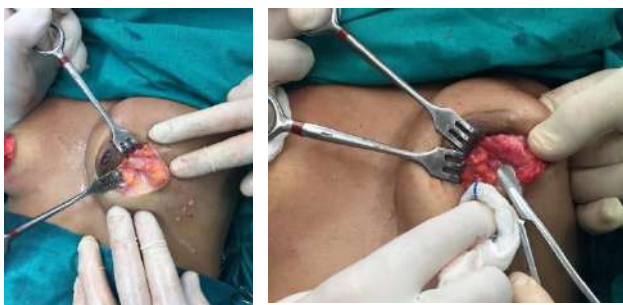


Fig 5:

Fig 6:

Intraoperative pictures (Fig. 5 & 6) showing cysts removal and liquid drainage

The treatment plan was decided to consist of two staged operations.

Surgical excision of big lesions in both breasts were done during the initial operation, using

periareolar incisions for the lesions adjacent to the nipple areolar complex, and separate incisions over remote lesions of the breast tissue. The majority of the lesions were located in the breast parenchyma. This first procedure took place 2 months after her initial consultation and in total 8 months after the fat transfer procedure she had for breast augmentation. The cystic lesions were found at random, mostly in the breast parenchyma and in the subcutaneous layer of the breast. Some were physically dissected and excised en bloc (Fig.7,8), while others could not be removed because of severe fibrosis and were drained (Fig. 5,6). The remaining capsule after drainage was also dissected and removed. The dead spaces were irrigated with Povidone Iodine solution and Normal Saline, and hemostasis was established. Antibiotic regime was administered pre intra and postoperatively for 2 weeks.

Specimens were sent for Pathology and cytology test. (Fig.5,6,7&8). The pathology results referred to encapsulated fatty lesions, with evidence of fat necrosis, without active inflammation. The cytology results of the drained fluid referred also to similar findings.

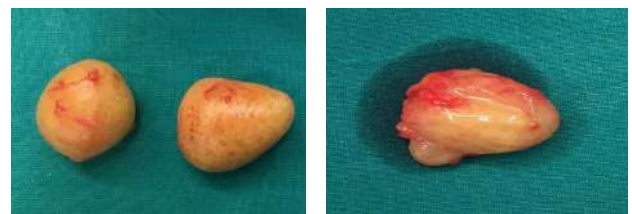


Fig 7:

Fig 8:

Right breast encapsulated oval cysts (Fig.7) and left breast encapsulated oval cyst (Fig.8) excised en-block and sent for pathology screening

Three months after the first operation the patient was readmitted to the hospital and underwent further surgical removal of remaining smaller lesions via periareolar incisions. The majority of these minor lesions were found subcutaneously.

Breast augmentation was performed after a comprehensive inspection of the breast and confirmation of eradication of the lesions seen on the preoperative MRI and US screening, in the same session, with round moderate plus profile, Cohesive II, silicone gel breast implants, in an attempt to reconstruct the impaired breast shape due to the disruption of the breast anatomy following excision of the liponecrotic or encapsulated fatty cysts. The implants were placed in a retro-glandular plane.



Fig 9:



Fig 10:

Patient after removal of fatty lesions and before breast augmentation with silicone implants (Fig. 9 & 10)

Results

An aesthetically pleasing breast augmentation result was achieved with the use of silicon gel implants, after two stages removal of the fatty lesions, giving the patient a symmetric breast contouring and relieving her from the hyper sensation, pain and the entire symptoms of the previous augmentation attempt with fat transfer.(Fig. 9, 10, 11, 12).



Fig 11:



Fig 12:

Patient after breast augmentation with silicone implants (Fig.11 & 12)

The two stages procedure was decided in order to secure that no active inflammation was present, a fact that would be a contraindication for silicon implant surgery in the first procedure.

Discussion

Fat transfer for breast augmentation is now increasingly used as an alternative to traditional breast augmentation treatments using silicone implants, delivering aesthetically satisfactory outcomes in the majority of instances. However, in order to minimize undesirable functional and cosmetic postoperative effects, the fat transfer technique must be used using lege artis. Patients must be analytically educated about the potential problems and the long-term outcomes. The technique's applied must be relevant and up-to-date to avoid complications.

Before deciding to use this procedure on patients, surgeons should be fully informed and trained. Close follow-up and patient reassurance, as well as the precise timing of any potential problems repair, are critical in handling such instances. Fat transfer for breast augmentation is a well-established method, although the outcomes are variable in terms of duration. The shape of the augmented breast by fat transfer can be of variable quality depending on the experience of the surgeon and the efficacy of the surgical technique. Another factor that might influence the ultimate result is the donor site's fat volume.

Breast augmentation using silicone gel implants has been shown to produce long term and stable outcomes. Even though fat transfer is an acceptable alternative procedure for patients who do not prefer to undergo a surgery with implants for a variety of reasons, using implant has been shown to provide stable and long lasting results.

Analytical explanation of these two different techniques, with their advantages and

disadvantages is of utmost importance to the patients, for the relevant decision to be taken prior to surgery.

Conclusion

This case report is a example of unfavourable consequences following fat transfer for breast augmentation due to poor method of execution and non-adherence to commonly accepted surgical protocols. The creation of cystic lesions, as well as the resulting functional and cosmetic manifestations in the patient, is most likely due to the large transfer of fat clumps in the breast tissue, which resulted in fat necrosis and encapsulation. Another cause of this problem might be fat injection inside the breast parenchyma. We cannot ascribe this problem to other factors that may have also played a part in this outcome, due to a lack of information on the procedure used for fat collection and processing prior to the transfer.

Compliance with ethical standards

Conflict of interest:

The authors declare that they have no conflict of interest. They also have no source of financial or material support.

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Case Report

Van der Woude Syndrome: A Case Report and Review of Literature

Sarder Rizwan Nayeem¹, Sadia Siddiky², Sayeed Ahmed Siddiky³

Abstract:

Van der Woude Syndrome (VWS) is an uncommon autosomal dominant disorder that affects embryologic facial development and is characterized by two labial pits in the lower lip and is usually associated with cleft lip and cleft palate. Congenital lip pits are frequently associated with cleft lip and/or cleft palate in VWS; nevertheless, lip pits may be the only symptom in this condition. The prevalence of VWS is about 1 in 35,000 to 100,000 births and accounting for 2% of all cases with cleft lips and palates.

A 10-year-old boy presented with bilateral pits on the lower lip, one on either side of the midpoint. There was evidence of maxillary hypoplasia and he also presented with bilateral accessory auricles. Additional deformities such as cleft lip or palate were not present. The patient's parents were eager for aesthetic correction. The lower lip pits with their tracts were excised under general anaesthesia. Wound healing and aesthetic outcome was satisfactory. Histopathological examination revealed fibrous tract, squamous epithelisation and fibres of skeletal muscle.

Keywords: Van der Woude Syndrome; genetic disorder

Introduction:

Van der Woude Syndrome also referred to in literature as autosomal dominant inherited clefting syndrome is a rare autosomal dominant condition that affects embryologic facial development and is characterized by two labial pits (fistulae) in the lower lip and is usually associated with cleft lip and cleft palate¹. Despite the fact that Demarquay reported the fistula labia inferioris congenita in 1845², Van der Woude analyzed these traits and discovered a link between lower lip pits and cleft lip or palate³. Congenital lip pits are frequently associated

with cleft lip and/or cleft palate in VWS; nevertheless, lip pits may be the only symptom in this condition⁴. The prevalence of VWS is about 1 in 35,000 to 100,000 births and accounting for 2% of all cases with cleft lips and palates⁵. VWS may be associated with other congenital features as hypodontia, maxillary hypoplasia, high arched palate, ankyloglossia, limb anomalies and congenital heart defects⁶. The VWS gene has been assigned to deletion in chromosome 1q32-q41 with mutation in the interferon regulatory factor 6 (IRF6)⁷.

One of the severe manifestations of this gene mutation is popliteal pterygium syndrome, which has some features including lower lip pits or cleft lip or palate in common with VWS, with the addition of popliteal webs and genital anomalies⁸.

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Case report

A 10-year-old boy with congenital deformity of the lower lips was brought to a floating hospital cleft camp by his parents. The boy did not complain of any symptoms but his parents were eager for surgical correction for aesthetic reasons. On examination, there were bilateral pits on the lower lip, one on each side of the midline (Fig. 1). There was no discharge of saliva from the pits on pressure.



Fig 1: 12-year-old boy with Van der Woude syndrome, presenting with bilateral pits in the lower lip.

There was evidence of maxillary hypoplasia and he also presented with bilateral accessory auricles. (Fig. 2) Additional deformities such as cleft lip or palate were not present. Frank dental anomalies and malocclusions were also not evident.



Fig 2: Lateral view showing, prominent lower lip and hypoplastic maxillae. Accessory auricle was also present.

A general medical check was conducted to rule out the possibility of systemic issues. Detailed investigations such as cephalometric examinations or genetic sequencing was not possible due to the remote location of the hospital, lack of facilities and financial constraints.

Procedure

Under general anaesthesia, excision of the pits along with their tracts was done. Haemostasis was ensured and closure attained by absorbable sutures. Postoperatively the patient recovered well and wound healing was satisfactory. The patient's parents were happy with the aesthetic outcome (Fig. 3).



Fig 3: Before and after excision of the lower lip pits.

Histopathological examination of the specimen (Fig. 4) revealed fibrous tract, squamous epithelialization and fibres of skeletal muscle.



Fig 3: Specimen of excised lower lip pits along with their tracts.

Discussion

Lip pits are very uncommon congenital condition anomalies, clinically presented as bilateral or unilateral depressions in the upper lip, lower lip, or the oral commissure with or without saliva secretion from their fistula⁴. The degree of clinical symptoms of VWS varies greatly even within family members, however lower lip pits, the main feature of VWS, may be the only symptom in this illness⁴.

The prevalence of VWS is about 1 in 35,000 to 100,000 births and accounting for 2% of all cases with cleft lips and palates⁵. The syndrome is an autosomal-dominant developmental malformation with variable expressivity and penetrance rate close to 80% to 100%⁵. The VWS gene has been linked to a loss on chromosome 1q32-q41, as well as a mutation in the interferon regulatory factor 6 (IRF6), however a second chromosomal location at 1p34 has also been discovered⁹. Lip pits can range in clinical appearance from asymptomatic minor depression to obvious discharging sinuses. These congenital malformations are of 3 types depending on their location: commissural, midline upper lip, and the most common kind is lower lip pits. They may be usually bilateral symmetric, but are occasionally bilateral asymmetric, microform, median, or unilateral¹⁰. They are likely to extend into the orbicularis oris muscle and sometimes communicated with the ducts of the underlying minor salivary glands, which may either continuously or intermittently drain small amounts of saliva¹¹.

There are other related traits that may or may not be present in a patient with the syndrome's cardinal indications. Cleft lip, cleft palate, hypodontia, ankyloglossia, high arched palate, limb deformities such as popliteal pterygium, and congenital heart conditions⁶.

Many studies have shown links between maxillary hypoplasia and VWD, as seen in our case¹².

Other associated features which can be seen are malocclusion, long face, narrow maxilla, protrusion of maxilla, high arched palate, crossbite, bifid uvula, and syngnathia¹³.

The following are considered in the differential diagnosis of Van der Woude Syndrome¹⁴:

1. Popliteal pterygium syndrome (PPS) that includes popliteal web, cleft lip and/or palate, lower lip pits in 60% cases, and anomalies of genitourinary system, such as cryptorchidism and bifid scrotum in males and hypoplastic labia majora and uterus in females. People with VWS have a risk of giving birth to offspring with PPS¹⁵.
2. Hirschsprung's disease (aganglionic megacolon combined with cleft palate and lip pits)¹⁶.
3. Orofacial digital syndrome type 1, with prominent orodental, facial, digital, renal, and central nervous system abnormalities. Orofacial signs include cleft palate, bifid tongue, hypodontia, and median cleft of the upper lip and/or lip pits¹⁷.
4. Ankyloblepharon Filiforme Adnatum—partial or complete full thickness fusion of the lid margins, cleft lip and palate, hydrocephalus, meningocele, imperforate anus, bilateral syndactyly, infantile glaucoma, and cardiac problems such as patent ductus arteriosus and ventricular septal defects¹⁸.

As the disorder shows a high affinity with clefts and a familial type of occurrence, close examination of relatives to recognize lip pits and clefts is critical for genetic counseling⁴. Although it is accepted in the literature that many individuals do not require or want surgery, the major rationale for excision of congenital lip sinus is correction of the aesthetic abnormality¹⁹. Recurrent inflammation will justify removal of the lip sinus tracts in a small minority of individuals⁵. The sinus tract should be completely excised, because if some of the mucous glands

attached to the fistula are left behind, this could allow a mucoid cyst to form. Loosening of the lip muscle has also been reported as a drawback of the operation²⁰.

Limitation

As the patient presented to us in a remote floating hospital, several necessary investigations such as cephalometric radiological examinations, detailed cardiac examinations and genetic sequencing could not be performed.

Conclusion

In conclusion, physicians should be aware of variable congenital disorders associated with lip pits. Among them, VWS has a variable clinical expression, and recognition of its lesser expression is difficult. Lip pits can be the only clinical finding which is suggestive of VWS, as in our case⁴.

If patients present with associated congenital abnormalities as mentioned above, a multidisciplinary approach for treatment should be undertaken, involving plastic surgeon, ENT surgeon, and dental and/or maxillo-facial surgeon, as required.

Since there is a probability of developing cleft defects by the offspring of the patients, genetic counselling is of great significance in these patients²¹.

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Commentary

Exploring the Link Between Cosmetic Surgery and Mental Health

Foara Tasmim¹

Dear readers,

Cosmetic surgery has become increasingly popular in recent years, with millions of people seeking procedures to improve their appearance and boost their self-esteem. While many individuals report positive outcomes and increased self-confidence following cosmetic surgery, there is growing evidence to suggest that there may be a link between these procedures and mental health.

A number of studies have found that individuals who undergo cosmetic surgery may be at an increased risk for developing mental health issues such as body dysmorphic disorder (BDD) and depression (Koran et al., 2010; Sarwer et al., 2005). BDD is a condition characterized by excessive preoccupation with perceived flaws in one's appearance, and can lead to severe social isolation, anxiety, and even suicidal thoughts (Phillips, 2001).

There are several possible explanations for this link. One is that individuals with underlying mental health issues may be more likely to pursue cosmetic surgery as a means of addressing their perceived flaws (Sarwer et al., 2005). It is also possible that the stress and emotional turmoil associated with the surgical process itself may contribute to the development of mental health problems (Koran et al., 2010).

There are several possible explanations for this link. One is that individuals with underlying mental health issues may be more likely to pursue cosmetic surgery as a means of addressing their perceived flaws (Sarwer et al., 2005).

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It is also possible that the stress and emotional turmoil associated with the surgical process itself may contribute to the development of mental health problems (Koran et al., 2010).

While more research is needed to fully understand the relationship between cosmetic surgery and mental health, it is clear that this is a complex issue that requires further attention. As healthcare professionals, it is important that we carefully assess the mental health of our patients before and after cosmetic surgery, and refer them for additional care as required.

We must also educate the public about the potential risks and benefits of cosmetic surgery, and ensure that individuals seeking these procedures are fully informed about the potential consequences. By taking a holistic approach to patient care, we can help to ensure the mental well-being of those who choose to undergo cosmetic surgery.

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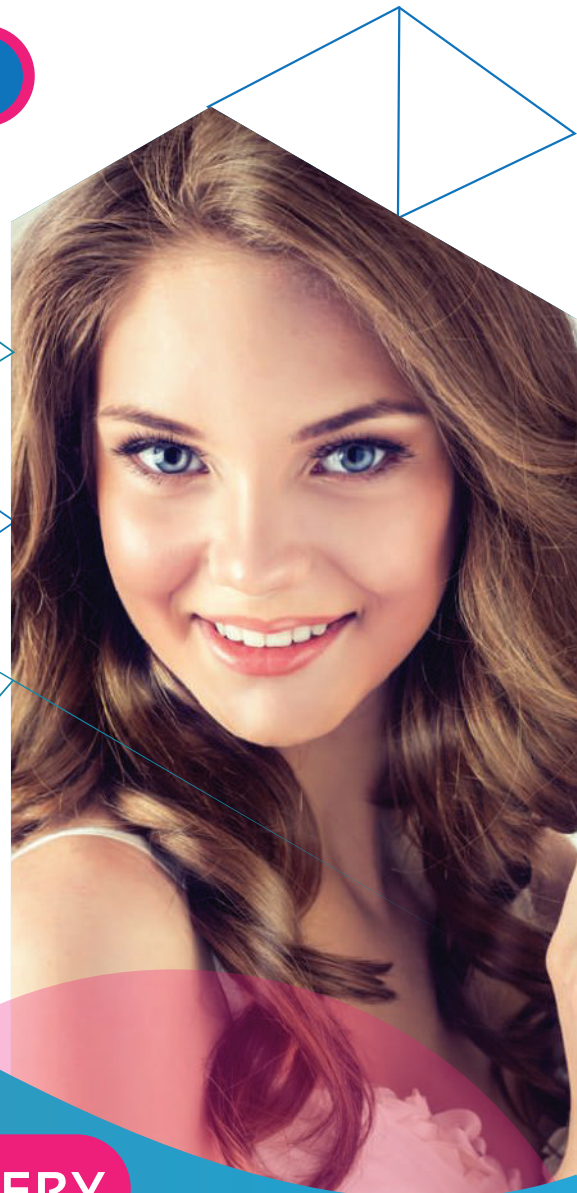
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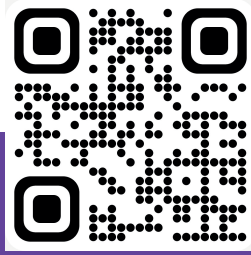
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