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FUNCTIONAL OUTCOME COMPARISON OF THORACODORSAL ARTERY PERFORATOR FLAP AND CIRCUMFLEX SCAPULAR ARTERY PERFORATOR FLAP IN AXILLARY DEFECTS

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ABSTRACT

Background: Axillary defects arise following trauma, oncological excision, infection, or postburn contracture and result in functional limitation of the shoulder joint in addition to aesthetic impairment. Reconstructive management requires a balance of durable coverage, minimal donor site morbidity, and restoration of shoulder biomechanics. Among various reconstructive strategies, perforator-based flaps such as the thoracodorsal artery perforator flap and circumflex scapular artery perforator flap have shown promising outcomes.

Objective: To compare the excellent functional outcome of thoracodorsal artery perforator flap and circumflex scapular artery perforator flap in the management of axillary defects.

Study design: Comparative study.

Duration and place of study: The study was conducted from June 2024 to May 2025 in the Department of Plastic Surgery, Fauji Foundation Hospital, and Rawalpindi.

Methodology: Seventy-eight patients aged 20 to 65 years presenting with axillary defects requiring flap coverage were enrolled and randomized into two groups of 39 patients each. In the thoracodorsal artery perforator flap group, the flap was elevated along the lateral border of the latissimus dorsi and inset in a propeller fashion, while in the circumflex scapular artery perforator flap group, dissection was performed medial to the scapular border and rotation up to 160 degrees achieved coverage.

Results: At six months, mean Constant–Murley Scores were higher in the thoracodorsal artery perforator flap group (87.78 ± 9.46) compared with the circumflex scapular artery perforator flap group (84.19 ± 10.94). Excellent functional outcomes were achieved in 71.8% and 51.3% of patients respectively, although the difference did not reach statistical significance. The TDAP group had a significantly longer operative time (190.79 ± 28.77 min) but a shorter hospital stay (4.38 ± 1.57 days) compared to the CSAP group (121.51 ± 28.37 min and 6.18 ± 3.21 days). Axillary contour assessment revealed a better aesthetic outcome in the CSAP group, which demonstrated fewer contour deformities (bulge >1cm} observed in 10.3 % of patients) and better adduction clearance (unsatisfactory clearance in 7.7% of patients) compared to the TDAP group (bulge >1 cm in 20.5 % and unsatisfactory clearance in 17.9% of patients).

Conclusion: Both flap techniques provide effective and reliable reconstruction for axillary defects.
KEYWORDS: Axilla, Reconstructive surgical procedures, Shoulder joint, Surgical flaps, Functional outcomes

INTRODUCTION

Axillary defects are a complex pathological condition that develop due to trauma, oncological resection, infection, or cicatricial contracture after burns and surgical procedures.[1] These defects not only cause morphological deformity but also result in limitation of glenohumeral joint mobility, nociception, and impairment in activities of daily living.[2] The management of axillary defects is a reconstructive procedure in which adequate soft tissue coverage and preservation of shoulder biomechanics are essential.[3] Split-thickness skin grafts, local fasciocutaneous flaps, and pedicled myocutaneous flaps have been utilized, but drawbacks such as recurrence of contracture, insufficient tissue bulk, and donor site morbidity are associated with them.[4] Therefore, perforator-based flaps have evolved as a more dependable modality, because they provide thin and pliable tissue, optimal vascularity, minimal donor site morbidity, and superior functional outcomes.[5]

The thoracodorsal artery perforator flap is one of the most frequently employed perforator-based flaps in axillary reconstruction.[6] This flap derives vascular supply from the thoracodorsal artery, a branch of the subscapular arterial system, and its perforators maintain a consistent perfusion.[7] Its strengths are provisioning of a pliable and thin fasciocutaneous flap, multidirectional rotation with a broad arc, and sufficient coverage of axillary defects without compromise of the latissimus dorsi musculature.[8] Retention of this muscle is essential as it preserves shoulder strength and kinematic function, essential for activities of daily living.[9] Additionally, donor site morbidity remains low because functional LAT bulk is preserved. For all the above-mentioned factors, the thoracodorsal artery perforator flap is a strong reconstructive choice, especially if functional restitution and donor site sparing are of main consideration.[10]

Conversely, the circumflex scapular artery perforator flap has also risen to prominence as a successful reconstructive option for axillary deficits.[11] Its vascularity is derived from the circumflex scapular artery, branching off from the subscapular arterial supply, and it assures stable perfusion with a fairly wide cutaneous terrain.[12] It is especially a good choice for covering medium-to-large size axillary deficits and provides an aesthetic positive contour due to its moldability.[13] Another positive aspect is the fact that its harvest does not impose sacrifice of major musculature and therefore prevents resultant major functional loss.[12] Its donor site also can be camouflaged in the scapular area and therefore provides an upper hand for aesthetic acceptability for the patient.[14] Compared to the thoracodorsal artery perforator flap, it provides an alternative anatomical choice, and the choice of the two is dependent on the nature of the defect, the surgeon's operative skill, and the patient's functional and aesthetic perception.[15]

In a study by Vaillant et al. reported a 17.1% complication rate for thoracodorsal artery perforator flaps and 0% for circumflex scapular artery perforator flaps in axillary defects.[16]

There is a compelling reason to conduct a study in Rawalpindi comparing the post-functional outcomes of thoracodorsal artery perforator and circumflex scapular artery perforator flaps used to treat axillary defects. While both flaps are extensively used to treat post-excisions of hidradenitis suppurativa and other axillary lesions, controlled comparative data on their effect on postoperative functionality, complication rate, and long-term shoulder movement is scarce, more so, in the regional setting. Performing the study in Rawalpindi would provide regional-specific data, inform the surgeon on the best reconstructive modality to use, as well as help improve the quality of patients as well as their quality of life locally.

METHODOLOGY

This randomized controlled trial was conducted from June 2024 to May 2025 in the Department of Plastic Surgery at Fauji Foundation Hospital, Rawalpindi, after approval from the institutional ethics review committee. The sample size was calculated using a reference proportion of 17.1% complication rate in thoracodorsal artery perforator flaps and 0% in circumflex scapular artery perforator flaps,[16] yielding a total of 78 participants with 39 cases allocated to each group through non-probability consecutive sampling. Patients aged between 20 and 65 years of both genders presenting with axillary defects requiring flap coverage following wide excision were included. Those with uncontrolled systemic comorbidities, recurrent local infection, prior axillary flap surgery, or inadequate perforator signals on Doppler assessment were excluded. Prior to participation, all participants signed an informed consent form. Demographic data, namely age, sex, body mass index and comorbidities was collected. Subsequent medical history collection included disease duration, previous treatments and functional restrictions. This was followed by a detailed examination to assess axillary and shoulder movement.

All procedures were performed under general anesthesia in either supine or lateral decubitus position depending on the defect side. Prophylactic antibiotics and venous thromboembolism prophylaxis were given to all patients. In the thoracodorsal artery perforator flap group (A), a dominant perforator was identified using a handheld Doppler and the flap was designed along the lateral border of the latissimus dorsi. Careful dissection was carried through the

subcutaneous plane and into the muscle fibers until the perforator was isolated. The flap was then elevated on a single perforator and inset into the axillary defect in a propeller fashion, with primary closure of the donor site whenever feasible. In the circumflex scapular artery perforator flap group (B), perforators were mapped preoperatively, and dissection was carried out medial to the scapular border to expose the vessels between teres major and teres minor. A single proximal perforator was preserved, allowing greater mobility of the flap. The flap was elevated, partially deepithelialized where required, and rotated up to 160 degrees to cover the axillary defect. In most cases the donor site could be closed directly. Operative time, flap size, blood loss, and need for transfusion were recorded. Postoperatively, all patients received standardized physiotherapy with early shoulder mobilization.

The functional outcome was evaluated using the Constant–Murley Score, which ranges from 0 to 100 and assesses pain, activities of daily living, range of motion, and strength, with higher scores representing better function. Functional outcome was assessed at three months and six months, and six-month score considered the final outcome. In this study, a score above 90 was considered an excellent functional outcome, 80 to 89 as good, 70 to 79 as fair, and below 70 as poor. Aesthetic outcomes were assessed at six months postoperatively by evaluating axillary contour and shoulder adduction clearance. Bulge formation greater than 1 cm was determined through clinical examination, while adduction clearance was assessed by observing unrestricted arm adduction against the trunk. Outcomes were categorized as satisfactory or unsatisfactory. All data were analyzed using IBM SPSS version 26. Continuous variables including age, body mass index, operative time, hospital stay and functional scores were expressed as mean ± standard deviation. While categorical variables such as gender and functional outcome were presented as frequencies and percentages. Chi-square test was applied for categorical comparisons. A p-value of 0.05 or less was considered statistically significant.

RESULTS

The study included 78 patients equally divided between Group A (Thoracodorsal Artery Perforator Flap) and Group B (Circumflex Scapular Artery Perforator Flap), with 39 patients in each group. In Group A, the mean age was 39.72 ± 9.66 years compared to 45.26 ± 9.17 years in Group B, with a mean BMI of 24.59 ± 2.64 kg/m² and 25.25 ± 3.22 kg/m² respectively. The operative time was notably longer in Group A at 190.79 ± 28.77 minutes compared to 121.51 ± 28.37 minutes in Group B, while hospital stay was shorter in Group A at 4.38 ± 1.57 days versus 6.18 ± 3.21 days in Group B. The mean flap size was larger in Group A at 137.76 ± 37.21 cm² compared to 119.80 ± 26.80 cm² in Group B, and blood loss was higher in Group A at 207.85 ± 78.55 ml versus 145.69 ± 60.38 ml in Group B. The Constant-Murley Score at 6 months was 87.78 ± 9.46 in Group A and 84.19 ± 10.94 in Group B. Regarding gender distribution, males comprised 13 patients (33.3%) in Group A and 9 patients (23.1%) in Group B, while females comprised 26 patients (66.7%) in Group A and 30 patients (76.9%) in Group B. Diabetes was present in 5 patients (12.8%) in Group A and 11 patients (28.2%) in Group B, while hypertension was documented in 7 patients (17.9%) in Group A and 11 patients (28.2%) in Group B (as shown in Table I).

Table I: Patient Demographics in both groups

n=78

Variables	**Thoracodorsal Artery Perforator Flap (Group A)** n=39	**Circumflex Scapular Artery Perforator Flap (Group B)** n=39
	Mean ± SD	**Mean ± SD**
Age (years)	39.72 ± 9.66	45.26 ± 9.17
BMI (kg/m²)	24.59 ± 2.64	25.25 ± 3.22
Operative time (minutes)	190.79 ± 28.77	121.51 ± 28.37
Hospital stay (days)	4.38 ± 1.57	6.18 ± 3.21
Flap size (cm²)	137.76 ± 37.21	119.80 ± 26.80
Blood loss (ml)	207.85 ± 78.55	145.69 ± 60.38
Constant-Murley Score at 6 months	87.78 ± 9.46	84.19 ± 10.94
Gender	**n (%)**	**n (%)**
Male	13 (33.3%)	9 (23.1%)
Female	26 (66.7%)	30 (76.9%)
Diabetes		
Yes	5 (12.8%)	11 (28.2%)

No	34 (87.2%)	28 (71.8%)
Hypertension		
Yes	7 (17.9%)	11 (28.2%)
No	32 (82.1%)	28 (71.8%)

The comparison of excellent functional outcomes revealed that 28 patients (71.8%) in Group A achieved excellent functional outcomes compared to 20 patients (51.3%) in Group B, while 11 patients (28.2%) in Group A and 19 patients (48.7%) in Group B did not achieve excellent outcomes, with a p-value of 0.063 indicating no statistically significant difference between the groups (as shown in Table II).

Table II: Comparison of excellent functional outcome between the two groups

n=78

Excellent Functional Outcome	**Group A n=39 n (%)**	**Group B n=39 n (%)**	**P value**
Yes	28 (71.8%)	20 (51.3%)	0.063
No	11 (28.2%)	19 (48.7%)	
Total	39 (100%)	39 (100%)	

When aesthetic outcomes were evaluated, the presence of bulge greater than 1cm was observed in 8 patients (20.5%) in Group A compared to 4 patients (10.3%) in Group B, however this difference was not statistically significant (p=0.347). Absence of bulge >1cm was noted in majority of patients with 31 cases (79.5%) in thoracodorsal artery perforator flap group and 35 cases (89.7%) in circumflex scapular artery perforator flap group. Regarding adduction clearance, satisfactory outcomes were achieved in 32 patients (82.1%) in Group A while 36 patients (92.3%) in Group B demonstrated satisfactory adduction clearance. Unsatisfactory adduction clearance was observed in 7 patients (17.9%) receiving thoracodorsal artery perforator flap and 3 patients (7.7%) receiving circumflex scapular artery perforator flap. The difference between two groups in terms of adduction clearance was not statistically significant (p=0.310) as shown in Table-III.

Table-III: Comparison of aesthetic outcomes between thoracodorsal artery perforator flap and circumflex scapular artery perforator flap in axillary defects

n=78

Aesthetic outcomes	**Group A n=39 n (%)**	**Group B n=39 n (%)**	**P value**
Bulge >1cm			
Yes	8 (20.5%)	4 (10.3%)	0.347*
No	31 (79.5%)	35 (89.7%)	
Total	39 (100%)	39 (100%)	
Adduction Clearance			
Satisfactory	32 (82.1%)	36 (92.3%)	0.310*
Unsatisfactory	7 (17.9%)	3 (7.7%)	
Total	39 (100%)	39 (100%)	

***Fischer Exact Test**

Stratified analysis by demographic variables demonstrated that among patients aged ≤40 years, 18 patients (72.0%) in Group A versus 8 patients (42.1%) in Group B achieved excellent outcomes with a statistically significant p-value of 0.048, while in patients aged >40 years, 10 patients (71.4%) in Group A versus 12 patients (60.0%) in Group B achieved excellent outcomes with a p-value of 0.267. For male patients, 10 (76.9%) in Group A versus 5 (55.6%) in Group B achieved excellent outcomes (p=0.180), while among females, 18 (69.2%) in Group A versus 15 (50.0%) in Group B achieved excellent outcomes (p=0.146). When stratified by BMI ≤25 kg/m², 17 patients (68.0%) in Group A versus 12 patients (48.0%) in Group B achieved excellent outcomes (p=0.083), and for BMI >25 kg/m², 11 patients

(78.6%) in Group A versus 8 patients (57.1%) in Group B achieved excellent outcomes (p=0.205). Among diabetic patients, 4 (80.0%) in Group A versus 6 (54.5%) in Group B achieved excellent outcomes (p=0.635), while among non-diabetic patients, 24 (70.6%) in Group A versus 14 (50.0%) in Group B achieved excellent outcomes with a statistically significant p-value of 0.046. For hypertensive patients, 5 (71.4%) in Group A versus 6 (54.5%) in Group B achieved excellent outcomes (p=0.650), whereas among non-hypertensive patients, 23 (71.9%) in Group A versus 14 (50.0%) in Group B achieved excellent outcomes with a borderline significant p-value of 0.051 (as shown in Table IV).

Table IV: Association of Excellent Functional Outcome with Demographic Variables

Demographics variables	Group	Excellent Functional Outcome		P-value
		Yes (n, %)	No (n, %)	
Age (years)				
≤40	A	18 (72.0%)	7 (28.0%)	0.048*
	B	8 (42.1%)	11 (57.9%)	
>40	A	10 (71.4%)	4 (28.6%)	0.267**
	B	12 (60.0%)	8 (40.0%)	
Gender				
Male	A	10 (76.9%)	3 (23.1%)	0.180**
	B	5 (55.6%)	4 (44.4%)	
Female	A	18 (69.2%)	8 (30.8%)	0.146*
	B	15 (50.0%)	15 (50.0%)	
BMI (kg/m²)				
≤25	A	17 (68.0%)	8 (32.0%)	0.083*
	B	12 (48.0%)	13 (52.0%)	
>25	A	11 (78.6%)	3 (21.4%)	0.205**
	B	8 (57.1%)	6 (42.9%)	
Diabetes				
Yes	A	4 (80.0%)	1 (20.0%)	0.635**
	B	6 (54.5%)	5 (45.5%)	
No	A	24 (70.6%)	10 (29.4%)	0.046*
	B	14 (50.0%)	14 (50.0%)	
Hypertension				
Yes	A	5 (71.4%)	2 (28.6%)	0.650**
	B	6 (54.5%)	5 (45.5%)	
No	A	23 (71.9%)	9 (28.1%)	0.051*
	B	14 (50.0%)	14 (50.0%)	

*Chi-square test, **Fisher's Exact Test

DISCUSSION

In evaluating the functional results of the TDAP and SCAP, the data show that the outcomes were favorable in both, but a noticeable tendency towards better results in TDAP was observed in terms of excellent function, with a success rate of 71.8% compared with the 51.3% in the SCAP group. However, the results were not statistically significant. The reason for the significantly shorter surgical time in the SCAP group can be attributed to the relatively superficial position of the circumflex scapular artery, compared with the position of the thoracodorsal artery, where considerable dissections are required on the part of the operative team. Regarding the increased hospital stay in the patient group undergoing the SCAP, the reason could be the sensitivity and limited movement of the patient due to the donor site being located in a weight-bearing area, with continuous pressure being exerted on the site due to the supine position adopted by the patient. The larger flap size achieved with the Thoracodorsal Artery Perforator Flap reflects the greater tissue availability in the lateral thoracic region and the robust vascular territory of the thoracodorsal artery system,

which permits safe harvest of larger tissue volumes without compromising perfusion. The higher intraoperative blood loss in Group A is directly related to the longer operative time and more extensive dissection required to harvest the flap from the highly vascular lateral chest wall region with its multiple muscular perforators. The superior Constant-Murley scores observed in Group A suggest that the anatomical positioning of the thoracodorsal flap donor site preserves shoulder girdle mechanics more effectively, as harvest from the lateral chest wall causes minimal disruption to the scapulothoracic articulation and periscapular musculature compared to the posterior scapular approach, which may compromise subscapular and infraspinatus muscle function. In present study, bulge formation greater than 1cm was observed less in circumflex scapular artery perforator flap group 4 (10.3%) compared to thoracodorsal artery perforator flap group 8 (20.5%), though difference was not statistically significant (p=0.347). This can be explained by the fact that circumflex scapular flap provides thinner and more pliable tissue which contours better to axillary region. The thoracodorsal flap sometimes include more subcutaneous bulk which may contribute to bulge formation. The adduction clearance was satisfactory in higher proportion of patients in Group B 36 (92.3%) as compared to Group A 32 (82.1%), with p value of 0.310. The good adduction clearance with circumflex scapular flap may be attributed to its thinner profile and better flexibility which allows unrestricted shoulder movement. Both flaps showed acceptable outcomes for axillary reconstruction .

Our mean operative time of 190.79 ± 28.77 minutes for TDAP flaps was substantially shorter than the 235 minutes reported by Elgohary et al . [16] and considerably less than the 300 minutes documented by Ali [17] likely reflecting our refined surgical technique and focused perforator dissection protocol that minimizes unnecessary tissue handling and reduces vascular pedicle exploration time. Conversely, our CSAP operative time of 121.51 ± 28.37 minutes was faster than Ali's [17] 200 minutes, which can be attributed to the superficial location and predictable anatomy of circumflex scapular vessels that facilitate rapid identification and dissection. The blood loss of 207.85 ± 78.55 ml in our TDAP group was markedly lower than Elgohary 's [16] 290 ml, suggesting that meticulous hemostasis and electrocautery discipline during perforator dissection can significantly reduce intraoperative bleeding despite the highly vascular nature of the lateral thoracic wall. Our hospital stay of 4.38 ± 1.57 days for TDAP patients was considerably shorter than the 9 days reported by Elgohary et al . [16] which may reflect differences in postoperative pain management protocols, early mobilization strategies, and discharge criteria, as modern enhanced recovery pathways emphasize rapid ambulation and outpatient wound care. Interestingly, our CSAP group required a longer hospital stay of 6.18 ± 3.21 days despite shorter operative time, contrasting with the generally favorable recovery profile suggested by Dabernig et al . [18] and this discrepancy likely stems from increased donor-site discomfort in the posterior scapular region where pressure during recumbency delays mobilization and prolongs analgesic requirements.

Our flap sizes were correspondingly averaged as 137.76 ± 37.21 cm² (TDAP) vs. 119.80 ± 26.80 cm² (CSAP) to fall within the ranges provided in the literature wherein defects up to 12 × 17 cm (204 cm²) were described by Elgohary et al. [16] 20 × 12 cm (240 cm²) flaps were obtained by Sever et al. [19] and skin paddles as extensive as 26 × 11 cm (286 cm²) were harvested by Hantash et al.[20] affirming that TDAP flaps confidently cover extensive axillary defects based on the strong vascular territory of the thoracodorsal artery. Likewise, our dimensions for CSAP were similar to those obtained by Dabernig et al. [18] who obtained up to flaps of 16 × 6 cm (96 cm²) as well as Ali [17] who obtained up to 22 × 10 cm (220 cm²), although our slightly smaller sizes for CSAP reflect the natural limitations of the posterior scapular skin where excess harvest would jeopardize primary closure. Constant-Murley scores in this study achieved 87.78 ± 9.46 (TDAP) vs. 84.19 ± 10.94 (CSAP) by six months, reaching very similar results as those obtained by Elgohary [16] who achieved very impressive improvement up to stage II hidradenitis to 92.0 ± 7.7 where patients improved significantly, as well as to stage III hidradenitis to 84.0 ± 12.4 where patients recovered about as expected, affirming that both perforator flaps significantly conserve shoulder function due to the avoidance of sacrifice of the major motor nerves as well as the preservation of the integrity of the periscapular musculature. Hawas et al. [21] also correspondingly described satisfactory functional Constant-Murley scores, although they had a significantly higher complication rate where they obtained a loss of the flap completely as high as 4.5% where the remaining patients obtained partial flap loss as high as 22.7%, indicating that very high rotation angle beyond that as high as 140° results in unfavorable venous drainage where ischemic complication is potentially enhanced than that which we obtained conservatively-designed flaps.

Our high functional outcome rate of 71.8% for TDAP beat the 51.3% that could be obtained with CSAP, although this difference was not significant statistically (p=0.063), while Elgohary et al.[16] claimed 60% "very satisfied" patients as well as 64.3% excellent aesthetic results with TDAP alone, so that patient satisfaction scores, being subjective, may reflect various confounding factors unrelated to pure functional scoring. The flap survival of 100% described by Sever et al.[19] for 13 TDAP cases as well as that described by Bhat et al. [22] for 20 lateral thoracic flaps stands compared to the flap losses recorded by Hantash et al. [20] who show an extensive cumulative loss that stood as a cumulative flap loss of 15% as well as venous congestions that influenced as many as 20% subsequent complex free TDAP transfers, so that pedicled transfers would retain the most effective perfusion consistency, retaining the complete vascular axis without the ischemic stress as a result of the anastamosis that is microsurgical. Our own results documented no cumulative flap loss, comparable to that kept by Ali [17] who observed only temporary venous congestion affecting two TDAPs as well as tip necrosis affecting two CSAPs, so that this consistency observed throughout several series confirms that perforator-based reconstructions yield predictable results as long as the anatomic rules are observed.

Complications presented by Hawas et al. [21] included 18.2% dehiscence of the donor site as well as 9.1% each of haematomas as well as extensive scars, the former likely being tension during closure that occurs during closure of the usually extensive perforator flap donor sites, while being limited to flap sizes allowing primary closure without undue tension our strategy likely prevented such morbidity. Sui et al. [23] achieved remarkable 98% flap survival with CSAP flaps in pediatric foot reconstruction using sophisticated variants including double-paddle, debulked, and chimeric designs, demonstrating that technical refinements can optimize outcomes even in challenging recipient sites, and their mean AOFAS score of 100 underscores the exceptional functional potential of properly executed perforator flaps.

The following are limitations in the current study, which must be recognized. Firstly, the study took place in a solitary tertiary care institution, which might limit its external validity to various hospital environments with a varied pool of patients, degree of surgical sophistication, and resources available. Additionally, the study included 78 patients, which, despite being sufficient for comparative purposes, might not be sufficiently powered for detecting relatively small but functionally significant differences between the two flap procedures, based on a borderline p-value of 0.063 for the main outcome measure of excellent functional outcome. Finally, the follow-up period of this study was relatively short, with a functional follow-up of only six months postoperatively, which might have been insufficient for identifying potential complications such as contour deformities of the donor site, flap atrophy, or shoulder dysfunction years after the surgery. Finally, there might be concerns for selection bias in allocating patients for either TDAP flap procedures or CSAP flap procedures, which were assigned on a surgeon's preference basis, which in turn might introduce a number of unseen study variables associated with defect difficulty and various individual factors for patients in a nonrandom fashion.

CONCLUSION

The conclusion of this study is that the procedure known as Thoracodorsal Artery Perforator Flap (TDAP) and Circumflex Scapular Artery Perforator Flap (CSAP) can be an efficient option for reconstructive purposes in terms of achieving satisfactory functional results with low rates of complications. The TDAP flap tends to provide better functional results in terms of higher Constant Murley scores, which signify better function, although it lacks statistical significance.

Conflict of interest: None

Disclaimer: None

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