

EP-186

용기성 피부섬유육종 광범위 절제 후 어깨
결손의 재건에 있어 흉견봉동맥 천공지
기반 프로펠러 피판의 임상적 의의

(Thoracoacromial Artery Perforator Propeller Flap
for Shoulder Reconstruction After Wide Excision
of Dermatofibrosarcoma Protuberans)



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Purpose: Dermatofibrosarcoma protuberans (DFSP) is a rare, locally aggressive cutaneous soft tissue sarcoma with a high propensity for local recurrence. Wide local excision with adequate margins is the standard treatment; however, reconstruction after tumor resection in the shoulder and upper anterior chest wall region remains challenging due to functional and aesthetic considerations

Methods: Immediate reconstruction was achieved using a thoracoacromial artery perforator-based fasciocutaneous propeller flap. The flap was elevated in the subfascial plane and rotated 120 degrees to achieve tension-free coverage.

Results: A 43-year-old male presented with a slowly growing mass in the right shoulder region. An initial excisional biopsy confirmed the diagnosis of DFSP. Subsequently, wide local excision with a 3-cm safety margin, including the deep fascia, was performed, resulting in a 6 × 6 cm soft tissue defect. Immediate reconstruction was achieved using a thoracoacromial artery perforator-based fasciocutaneous propeller flap. The flap was elevated in the subfascial plane and rotated 120 degrees to achieve tension-free coverage. Postoperatively, the flap survived completely without complications. Final histopathological examination confirmed negative peripheral and deep resection margins.

Conclusion: This case demonstrates that a thoracoacromial artery perforator-based fasciocutaneous propeller flap is a reliable and effective reconstructive option following wide excision of DFSP in the shoulder and upper anterior chest wall region. The technique provides durable soft tissue coverage while preserving shoulder function and minimizing donor-site morbidity, making it a valuable option for oncologic reconstruction in this anatomically demanding area.

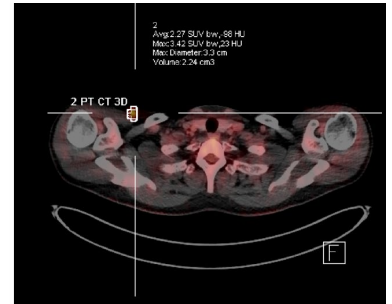
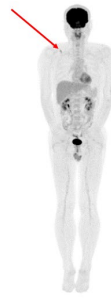


Figure 1 PET-CT demonstrated increased residual uptake at the site of cancer excision.

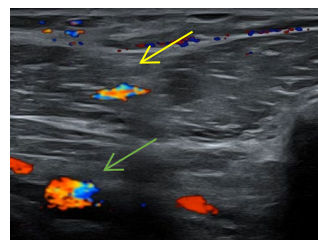


Figure 2a USG image shows tracing of the deltoid branch of the thoracoacromial artery (Yellow arrow) & axillary artery (Green arrow)

Figure 2b Marking of the traced thoracoacromial artery.



Figure 3a Design of a thoracoacromial artery perforator-based propeller flap (6 × 11 cm).

Figure 3b Subfascial thoracoacromial artery perforator-based propeller flap with preservation of the dominant perforator



Figure 4 Thoracoacromial artery perforator-based fasciocutaneous propeller flap after 120-degree rotation, achieving tension-free coverage of the defect.

Figure 5 Postoperative photograph (March 10, 2026; POD 36) showing a stable thoracoacromial artery perforator-based propeller flap with well-maintained defect coverage.