A deltopectoral (DP) flap is commonly used in the reconstruction of the neck region.1–3 The DP flap donor site is usually reconstructed by skin grafting. However, scars on the patient’s shoulder region are not aesthetically acceptable. Although this flap has a long history, a few reports on the DP flap donor-site reconstruction exist. In this report, we treated a 58-year-old man with a skin and soft-tissue defect using a DP flap transfer technique. The DP flap donor site was covered with a pedicled TDAP flap. As far as we know, this is the first case of reconstruction of a DP flap donor site using a pedicled TDAP flap. We herein describe our operative procedure.

**CASE REPORT**

A 58-year-old man was referred to our hospital complaining of neck pain, neck swelling, and a high fever. The findings of the neck computed tomography and lower jaw X-ray suggested that he had a large subcutaneous abscess due to acute mandibular osteomyelitis caused by dental caries. A tracheostomy was performed by a head and neck surgeon. A neck incision was made, and then the abscess was drained. Ten days later, the abscess disappeared and his body temperature was normalized. Two weeks after drainage, the wound of trachea due to tracheostomy was closed by a head and neck surgeon. However, skin necrosis occurred and the patient developed a large skin and soft-tissue defect (10 × 10 cm) in the neck. The Plastic and Reconstructive Surgery Department was consulted for the reconstruction of the defect. Three weeks after drainage, reconstruction of the neck was performed under general anesthesia by oral intubation. We performed wide debridement and released the contracture of scar on the neck. The size of the skin and soft-tissue defect was 8 × 10 cm (Fig. 1). A 15 × 7 cm DP flap was harvested from the left DP region (Fig. 1). The location of the TDAP was preoperatively identified by Doppler ultrasound. One musculocutaneous perforator was identified at 9 cm from the center of axillary fossa and 1 cm posterior from the anterior border of latissimus dorsi muscle. A 16 × 8 cm pedicled TDAP flap was harvested. Cephalic end of the flap was 6 cm from the perforator, and caudal end of the flap was 10 cm from the perforator (Fig. 2). The thoracodorsal artery was dissected at the level of subscapular artery. The length of vascular pedicle was 20 cm. The DP flap was transferred to the anterior neck defect, and the TDAP flap was shifted up to 90 degrees and transferred to the donor-site defect of the DP flap via a subcutaneous tunnel (Fig. 3). The donor site of the TDAP flap was primarily closed. The postoperative course was uneventful. No flap necrosis or abscess formation was observed. The contracture of the DP region was not observed postoperatively. The scarring on the DP region was aesthetically acceptable. The texture and color matched with the donor site of the DP flap. Bulkiness at the DP region was not observed (Fig. 4).

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DISCUSSION

Since the DP flap was first introduced by Bakamjian in 1965, many authors have reported various reconstructions using the flap, of which the donor site was mostly reconstructed using skin grafting. We have also performed anterior neck region reconstruction using the DP flap. However, we have felt the need for a new procedure for the reconstruction of the DP flap donor site. This is because the scars of skin grafting for donor site of DP flap are not aesthetically acceptable and cause scar contracture of the DP region. There are only a few reports on how to reconstruct the DP flap donor site. Sasaki et al. used a V-Y advancement flap to reconstruct the DP flap donor site. In this report, they suggested that a large DP flap should not be harvested because a V-Y advancement flap is also harvested from the anterior chest wall region. Reconstruction of face or neck an expanded DP flap has also been reported. The musculocutaneous perforator (x) was identified at 9 cm from the center of axillary fossa and 1 cm posterior from the anterior border of latissimus dorsi muscle (dots).

The anterior shoulder skin was expanded using a tissue expander, and then the donor site of DP flap was closed using the expanded skin. This procedure is useful and can reconstruct large skin and soft-tissue defects.

However, more than 2 surgeries are required. In our case, we could not use a tissue expander because the patient already had a skin and soft-tissue defect in the neck. We performed a TDAP flap transfer for the DP flap donor site. TDAP flap, which was first introduced by Angriagiani et al. in 1995 can harvest a large skin flap even with only 1 perforator. Pedicled TDAP flap has been used for the reconstruction of the breast, anterior chest wall, and axilla. However, reconstruction of the DP flap donor site using a pedicled TDAP flap has yet to be reported. Both DP flap and TDAP flap were elevated simultaneously in our procedure because the surgery was performed in the supine position. This is also an advantage of our procedure. In 2016, Lee et al. reported on donor-site morbidity following a surgery using a TDAP flap. In their report, more than 96% of patients with a TDAP flap width of less than 10 cm could receive primary wound closure. They also reported that harvesting a large skin paddle did not influence the development of donor-site complications. In our case, the postoperative scar was aesthetically acceptable, and no scar contracture was observed. The texture also matched with the recipi-
ent region. In addition, defatting of the shoulder region was not required because the TDAP flap was harvested without the latissimus dorsi muscle. We believe that the reconstruction of the DP flap donor site using a pedicled TDAP flap is useful.

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