INTRODUCTION

In 1918, Johannes Fredericus Samuel Esser was the first to describe the bilobed flap for closing a defect in the area around the tip of the nose.\(^1\) It is a double transposition flap and most useful for facial reconstruction, particularly the nose. The major advantage of the bilobed flap is the ability to recruit skin for construction of a flap from areas of skin redundancy that are not adjacent to the defect. This is especially useful when the flap is applied to facial areas where skin is less mobile (e.g. nasal tip, temporal forehead), because it allows the reconstruction of the primary defect with local skin of matching consistency and color.\(^1\) Bilobed flaps share a single base. Blood supply to the flap does not flow through a single artery, rather via many small musculocutaneous and cutaneous arteries.\(^2\) The bilobed flap is designed next to the wound. The first lobe is adjacent to the defect and is of the same size or slightly smaller than the defect to fully cover the defect and permit tension-free closure. The second lobe, a smaller flap, must come from an area of relaxed skin tension, to close the first lobe.\(^1\)

Traditionally, bilobed flaps have been used in facial reconstructive surgery to repair defects of the lower third of the nose, including defects of the nasal ala, supratip and nasal tip. Zimany reported his experience with bilobed flaps at several anatomical sites including the face, trunk, and sole of the foot.\(^4\) Several other authors have expanded the classic use of the bilobed flap. However, most authors now share the opinion that this flap is most useful for facial reconstruction. Facial defects, especially on the cheeks, can be repaired even if they are up to 6 cm in size.\(^1\)\(^,\)\(^2\)

As a result of a tumor resection, burns and trauma, larger skin wounds can occur on the breast, neck or back areas. Healing dysfunction after serious operations, such as sternotomy, can also lead to larger skin defects. Various methods have been described for reconstruction of trunk defects. For larger wounds on the trunk, the musculus trapezius flap, the musculus latissimus dorsi flap, the musculus pectoralis flap and the TRAM flap (TRAM = Transverse Rectus Abdominis Musculocutaneous) are used. The bilobed flap has rarely been described to cover larger defects on the breast and trunk.\(^1\)

Using two case studies, the authors are presenting a classic indication for a bilobed flap to cover a small defect on the nose as well as covering a larger skin defect after tumor resection on the jugular notch.

**TECHNIQUE**

The first case involved a 67-year female patient who presented with a recurring and slightly bleeding lesion on her right nasal ala. The area was examined under microscope during the course of the ENT examination and a small basal cell carcinoma was discovered. The excision and temporary coverage, with a synthetic skin substitute, was performed under local anaesthesia. After

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**ABSTRACT**

A variety of flaps are available to cover skin defects after surgery or trauma in the head and neck area. The bilobed flap is a double transposition flap commonly used in reconstruction of small-to-medium skin defects of the face where skin is less mobile. However, larger defects can also be effectively treated with a bilobed flap in certain cases. The classic indication to cover a small defect on the nose and covering a large skin-defect after tumour resection in the jugular notch. After sufficient mobilization, the defects could easily be closed with no wound complications and with very good aesthetic and functional outcome. The bilobed flap, as a local flap, is possible in suitable locations even for larger skin defects. In addition to the simplicity of the procedure, good aesthetic results can be expected.


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complete resection and histological analysis, the 0.8 cm wound was covered with a bilobed flap from the lateral side of the nose, also using local anaesthesia (Figure 1).

No complications of any sort occurred postoperatively, the flap healed quite well, and the patient is satisfied with the cosmetic results.

The second case involved a 73-year male patient presented with a Merkel cell carcinoma in the area of the fossa jugularis, which had already been confirmed by biopsy results externally. The mass was indolent, reddish, and cutaneous measuring 5 cm in diameter. Otherwise, the otolaryngological examination was unremarkable and there were no palpable cervical nodes. The patient refused further staging examinations. Due to the histology results and according to established guidelines, a resection of the pathological findings with a safety buffer of 3 cm was performed (Figure 2) and a temporary closure of the defect (12 cm in diameter) was carried out with a synthetic skin substitute (Syspur Derm®). The specimen was histologically analyzed, and the previous external histology results were confirmed (Merkel cell carcinoma; CK 8, 18, 20: point-like paranuclear positive; synaptophysin, chromogranin, CD 56: positive). The defect was covered with a right-sided pediculated bilobed flap taken from the thoracical wall (Figures 2 and 3). So far post-op check-ups have shown a symptom-free patient with very good postoperative result and with no sign of a local recurrence of the initial complaint (Figure 3). Two years had been passed since the procedure at the time of reporting the technique. Recommended examinations, in particular a sonography of the soft tissues of the neck, had been refused by the patient.

**DISCUSSION**

Besides the classical bilobed flap, there are different modifications available. In 1989, Zitelli adapted the design of Esser’s bilobed flap by reducing its rotation angles. It is designed to move more skin, without deformation, over a larger distance than it would be possible with a single transposition flap in the same location. The bilobed flap is very flexible and relatively simple to lift from available tissue compared to many other local conventional flaps. It has a simple design, is safe to elevate and results in minimal donor-site morbidity as well as yielding good aesthetic results. All of these things make the bilobed flap very popular in plastic-reconstructive facial surgery.

Another advantage is the very low complication rate after defect coverage. The most common complications seen are scar erythema, flap pincushioning or slight changes in the colour of the flap. Larger wound dehiscence, partial or even complete flap necroses are rare. In an average of 3 - 6% of the cases, a revision or refinement of the flap is necessary. Most common revision techniques are selective laser photothermolysis and scar excision. That is why the bilobed flap is the repair of choice for defects located between 0.5 and 1.5 cm of the distal and lateral aspect of the nose, particularly defects involving the lateral tip, supratip, or tissue near the tip.

The first case described a classic indication for a bilobed flap: a small, round defect after a complete excision of a basal cell carcinoma on the right nasal ala. The successful coverage was performed with a bilobed flap, modified by Zitelli, from the lateral sidewall of the nose. After removal of the stitches, the check-up showed a healthy, fully healed flap. Advantages of this procedure are both skin colour and skin texture in the area where the flap is taken from, and the defect area differ very little, and even postoperatively there are no changes in the shape of the nose.

For the closure of larger defects on the head, neck and breast, multiple local advanced flaps or pediculated flaps are available. Of course the larger the defect, the larger the area from which tissue is taken to form the flap. This increases the potential risk of complications.
The second case showed the coverage of a big wound in the fossa jugularis after total resection of a Merkel cell carcinoma. Due to the patient’s advanced age, there was already significantly reduced skin elasticity, and after local undermining of the skin near the defect, a bilobed flap from the thoracical wall pediculated on the right was developed (Figure 2). Thanks to the quick and smooth coverage of the defect, the blood loss was kept to a minimum during the operation and the operation itself held to the necessary minimum time. This reduced the complication risk. Postoperatively, and at the 4-month check-up, the results were aesthetically and functionally very good with no obvious asymmetry in the wall of the thorax (Figure 3).

These two cases show that the bilobed flap can be used to cover not only small defects on the nose (for which it is typically known); but also in other anatomical areas of the head and neck, in selected cases.\textsuperscript{6-9}

CONCLUSION

The bilobed flap is a common procedure for covering small skin defects on the face, and especially the nose. For larger defects, for example result from excisions of malignant tumors, a bilobed flap is also a good option, if the location is suitable. The other advantage, in addition to the simple flap lifting and relatively low operative effort compared to free flaps, is a very good aesthetic result.

REFERENCES