

Achieving a Good Aesthetic Result in the Correction of Giant Nevus of the Labiomental Area

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Summary: Benign skin lesions of the face require appropriate surgical treatment. Giant pigmented skin lesions possess the high risk of malignancy which sometimes is not possible to diagnose preoperatively. Majority of the traditional techniques for lower lip and chin reconstruction were developed for the skin cancer resections and are extensively aggressive and disfiguring in case of benign lesions. Perhaps the less invasive approach based on local skin flaps would lead to better aesthetic and functional outcome. We present a case report of the 67-year-old patient who has passed through numerous unsuccessful attempts of correction of the giant nevus of the chin and lower lip area with continued growth. At the time of our surgery, lesion almost covered the whole chin and lower lip area. Appropriate unaffected skin margins excision was performed, and the defect was addressed with combination of traditional incision patterns with local skin flap technique. We believe that our approach provides a good aesthetic and functional outcome in benign lesions correction of the labiomental area. (*Plast Reconstr Surg Glob Open* 2020;8:e2726; doi: 10.1097/GOX.0000000000002726; Published online 27 April 2020.)

INTRODUCTION

The most common reason for lower lip reconstruction is the squamous cell carcinoma, which implies aggressive surgical treatment.^{1,2} Melanocytic nevi³ and traumatic injuries are less frequent conditions for reconstruction; hence, the reconstruction approaches of the lower lip are mainly based on experience of treatment of carcinoma.

Mental and labial regions are considered to be different, but conjoined regional aesthetic units,⁴ hence the operative techniques of the vast lower lip defects closure often involve the chin area. Segmentation of the area of wound into smaller units of the face at the planning of the surgery is a proven method to achieve more satisfying aesthetic results.^{5,6} The lower lip and chin units both form aesthetically distinguishable complex relief and shape of the anterior part of the lower face. These units are bordered by the upper lip upper mucous margin superiorly, submental crease inferiorly, and by labiomandibular creases laterally. They include several significant surface anatomic features: vermilion, white roll on the vermilion–cutaneous junction,

cutaneous part of lower lip, the inverted U-shape labiomental crease, and the soft tissue pad of chin. Labiomental crease is a well-defined border between lip and chin region, and its depth depends on inclination of lower incisors.⁷ In lip reconstruction, it serves as a region border in which the incision can be planned. Depending on the depth and width of lesion, the reconstruction of the lip could be performed on 2 principal layers—cutaneous (mucosal) and full thickness. Small full-thickness defects smaller than 1 cm, as superficial skin defects are closed by fusi-shaped V/W, incisions oriented along the lines of minimal tension.^{2,8,9} Submental flap has proven to be a good alternative for head and neck reconstruction providing excellent color and texture matching skin for a defect closure in chin area.¹⁰

Additionally, the vaster lower lip cutaneous defects can be closed by chin transposition flap.¹¹

For the vast defects of the lower lip, a variety of 1-stage flaps is proposed. Karapandzic method is more favorable for the full-thickness reconstruction of the central part of lower lip and preserves the innervation and vascularity of lower lip.^{9,11,12} Webster-Bernard advancement flaps are suitable for the near-total defects of lower lip allowing recruiting the skin from the cheeks.¹³ The staircase flap with preservation of the orbicularis oris, depressor anguli oris, and depressor labii inferioris allows to attain satisfying aesthetic and functional result.²

Cross-lip flaps as Abbe or Estlander are generally 2 staged and allow to reconstruct the whole aesthetic unit or lower or upper lip; the subsequent

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reinnervation restores the motor function of transplanted segment.^{11,14}

Free flaps like radial forearm⁹ and palmaris longus flaps¹⁵ or gracilis flap⁶ have been described in the cases of almost total chin and lip reconstruction.

For small defects, after Mohs surgery, the elliptical excision with primary closure is a viable option.¹⁶ When surgical approach is planned, it should be considered that pigmented lesions possess a significant risk for malignancy.¹⁷

Majority of the described techniques were developed for the reconstruction after the skin cancer resections. In case of benign lesions, these techniques might be excessive due to partial or total impairment of function and poor scarring. Perhaps the less invasive approach based on local skin flaps of the chin and lower lip area would lead to better aesthetic and functional outcome.

CASE REPORT

A 67-year-old woman was referred to our department for a correction of the giant nevus of the chin area. Nevus appeared 20 years ago in the age of 47, and few attempts to excise it had been performed since then. The first excision was performed at the age of 47, then lesion recurred, laser correction was performed at the age of 55, radiofrequency treatment was performed at the age of 58, and cryotherapy attempt was performed at the age of 62. Every attempt resulted in recurrence of lesion with continued growth.

Neoplasm extended from the lower border of mental area to the white roll of the lower lip. Presumptive intra-dermal pigment nevus was 2.7 cm width and 3.8 cm length (Fig. 1).

A routine examination included ultrasound of regional lymph nodes, cytology, punch biopsy, and computed tomography. Benign nature of the lesion was confirmed.

We planned surgical correction with simultaneous defect closure. Preoperative markings included lesion resection border with visually intact skin margins, medial part of depressor anguli oris muscle, and dissection limits of the marionette lines laterally.

Surgery was performed under general anesthesia. Full-thickness incision was made with 5 mm surgery margins on the unaffected skin.

Lesion with underlying subcutaneous tissue was completely excised right above the muscular plane with the simultaneous meticulous hemostasis. The dimensions of the soft tissue defect after excision were 3.2 cm width and 4.3 cm length. Local skin flaps were undermined from the wound edges to lower lip border and to marionette lines laterally. Two horizontal skin incisions were performed along the vermilion–cutaneous junction of the lower lip to prevent its deformation (Fig. 2). Wound edges were approximated with Monocryl 3/0. Finally, the skin was closed with Prolene 4/0 running suture. Small rubber drain was left in place for drainage and removed the next day (Fig. 3).



Fig. 1. The patient before surgery.



Fig. 2. Defect right after the excision of giant nevi with 2 horizontal incisions performed along the lower lip border to prevent lip deformation.

The result of histological examination showed small superficial areas of melanoma pT1a (Breslow thickness 0.4 mm) in benign nevi tissue. Patient was routinely examined with ultrasound every 3 months within the first year and every 6 months during the second year after the operation. No evidence of recurrence was observed in course of 2 years after the surgery (Fig. 4).



Fig. 3. The wound edges approximated without tension.



Fig. 4. The patient 2 years after surgery.

CONCLUSIONS

Although our approach is developed for benign pigmented lesions, it provides the appropriate surgical margins which should be secured due to the potential malignancy risk. Local flaps provide the best possible

color and texture matching skin for attaining of a good aesthetic result.

Traditional techniques of lip and chin cancer resection and subsequent reconstruction are excessively aggressive and could lead to poor scarring and distortion of natural facial expression and oral sphincter function of the lower lip. Combination of traditional incision patterns with skin flap technique may be more appropriate in the similar cases.

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