Case Report

Managing lip large papilloma extirpation defect by arterialized advancement vermilion flap

Rahul Sahai¹, Sudhir Singh²*

¹Department of Plastic Surgery, S. N. Medical College, Agra, U. P., India
²Department of Plastic Surgery, Getwell Hospital, Varanasi, U. P., India

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*Correspondence:
Dr. Sudhir Singh,
E-mail: s.sulekha@gmail.com

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ABSTRACT

The close resemblance of squamous papilloma with verrucous carcinoma and the chief etiological factor associated with its development, the human papillomavirus (HPV) raises a doubt about its close association with malignancy. The best way to treat HPV growths is surgical removal and assessment of lesion by histopathology. The defect needs reconstruction with full function and aesthetic outlook. Thirty-seven years old young man with history of tobacco chewing developed slow growing papilloma in upper lip in one year. It was excised fully and the defect was repaired by arterialized lip vermilion mucosal flap based on slightly tortuous labial vessel and so the flap could be elastically stretched even up to fifty percent of lip length and applied successfully. Same patient developed papilloma in lower lip as a separate primary after two years of nonrecurrence of previous operated upper lip papilloma. Lower lip lesion was excised similarly and repaired with same type of vermilion mucosal advancement flap from adjacent part of lower lip defect created. The post-operative period was uneventful and after three years of last operation there is no recurrence in either lip. Vermilion flap which is based on labial artery containing composite tissue comprising of mucosa and portion of orbicularis muscle mainly has been utilized to reconstruct the post excision papilloma lip defect with excellent functional and aesthetic results. There was no microstomia. It is single stage not involving donor site like tongue or cheek mucosa and is good upto half of lower lip defects.

Keywords: Vermilion arterialized advancement flap, Lip defect, Papilloma

INTRODUCTION

Lip squamous papilloma is common mucosal mass. It is manifested as a papillary or verrucous exophytic mucosal mass due to benign proliferation of the stratified squamous epithelium. Since associated with verrucous carcinoma due to the human papillomavirus (HPV) as a cause raises a doubt about its close association with malignancy.¹ Persistent infection with HPV is considered to be the main cause for the occurrence of cervical cancer but HPV in majority of white oral mucosal lesions manifests as flat, exophytic, wart-like, or papillary proliferations. HPV6, 11, 13, and 32 are associated with low risk HPV types but association of high-risk types of HPV such as HPV16, 18, 31, 33, and 35 are mainly seen with cervical cancers.² However, HPV prevalence in malignant head and neck tumors varies widely (1-100%).³ High-risk HPV types have been detected in hyperplastic and dysplastic mucosal lesions of the oral cavity.⁴ Keeping in mind, the association of this lesion with oral dysplasias and carcinomas an early diagnosis clinically as well as histopathologically becomes important and so the resection of the papilloma in first sitting is very important. However, excision of big lip papilloma requires aesthetic and functional reconstruction having proper lip seal and sphincteric mechanism. Here
we are going to discuss one case of papilloma of upper lip treated initially and then again treated for lower lip papilloma occurrence after two years with adjacent arterialized vermilion advancement flaps with good aesthetic and functional results.

CASE REPORT

Thirty-seven years old young man with history of tobacco chewing developed slow growing papilloma in upper lip in one year (Figure 1). It was excised fully and the defect was repaired by arterialized lip vermilion mucosal flap based on slightly tortuous labial vessel and so the flap could be elastically stretched even up to fifty percent of lip length and applied successfully (Figures 2-5). Same patient developed papilloma in lower lip as a separate primary after two years of nonrecurrence of previous operated upper lip papilloma (Figure 6). Lower lip lesion was excised similarly and repaired with same type of vermilion mucosal advancement flap from adjacent part of lower lip defect created (Figure 7 and 8). The postoperative period was uneventful and after three years of last operation there is no recurrence in either lip.

Figure 1: Pre-operative papilloma of upper lip of one-year duration.

Figure 2: Intra-operative upper lip defect created.

Figure 3: Arterialized vermilion flap.

Figure 4: Reconstructed lip.

Figure 5: (a) Image after one month and (b) after one month of repair.

Figure 6: Lower lip papilloma after two years with no recurrence of operated upper lip.
human papillomavirus (HPV) raises a doubt about its close association with malignancy. The best way to treat HPV growths is surgical removal and assessment of lesion by histopathology. The defect needs reconstruction with full function and aesthetic outlook. Numerous methods have been described for lip repair and are available. There are many methods for reconstruction of loss of tissue of the lip. Superficial skin or mucosa loss after excision of the lesion should not be covered by skin graft or mucosa as required because it is unaesthetic and may break the Klien line or vermilion white roll if it crosses its borders. Flaps are far better choice. Lip reconstruction methods can be classified according to its mucosa and skin structure. Red lip vermilion can be constructed by tongue flap, advancement mucosal flap, buccal musculocutaneous flap and mucosal graft with its advantages and disadvantages. Mucosal graft is not aesthetically good and tongue flap is tedious requiring two stages and involvement of donor tissue from other organ. Buccal flap sacrifices tissue from cheek mucosa. However advancement mucosal vestibular flap from local defect area is found to be better suited for cosmetic lip coverage in lip defect but gives thin appearance of reconstructed lip. Vermilion myomucosal or myomucosalcutaneous arterialized advancement flap is an axial patterned flap based on the marginal labial artery encircling the lip. The labial artery runs in slightly spiral pattern and so can be elastically elongated even to cover fifty percent of lip vermilion defect and restore the orbicularis sphincter ring without comprising mouth opening size, function and aesthetics compromise. The labial vessels bifurcate from the facial artery crossing the cheek near the labial commissure. They are the same vessels that the Abbe, Estlander and Karapandzics used in their flap designs. The reconstruction of lip defects should go for good aesthetic result and preserve the function of the oral sphincter. The available vermilion tissue is raised as an aesthetic subunit containing the labial artery within a composite tissue sandwich consisting of orbicularis oris muscle and labial mucosa on the posterior aspect and orbicularis and labial skin on the anterior aspect. Cutting through the mucocutaneous junction of the vermilion with lip skin exposes the orbicularis muscle. Reconstructing the lip defect up to fifty percent extent can be done from available lip tissue left after removal of papilloma lesion is the method of choice and has good functional and cosmetic outcomes. It has good sphincter function and lip seal.

CONCLUSION

Papilloma of lip is unsightly and surgical removal is best option followed by adjacent arterialized myomucosal or myomucocutaneous vermilion advancement flap based on marginal labial artery. The flap seems to be elastic in nature as it can easily cover even fifty percent of lip defect created by excision of lip papilloma. Here the patient has no recurrence even after long period of follow-up and has good cosmetic and functional lip seal.
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