

Lower lip shave for squamous cell carcinoma reconstruction



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Lower lip shave for reconstruction of lower lip squamous cell carcinoma

Introduction

Global estimates of the incidence of oral squamous cell carcinoma vary slightly between various sources, but it appears to be around the eighth commonest site for malignant tumours, with approximately 300,000 cases per year (Shaw, Pace-Balzan, & Butterworth, 2011, Parkin et al. 2005) (Shaw et al. 2011) (Scully & Bagan, 2009) (Saman Warnakulasuriya, 2009). The relative incidence of lower lip cancer is 35%, which is the highest among oral cancers sites and is most likely due to chronic exposure to sunlight (Bauer et al. 2014). Although the modifiable risk factors such as tobacco, alcohol, diet and lifestyle (S. Warnakulasuriya, 2009) have been identified in the past, only a modest decline in incidence has been reported in recent decades (Chaturvedi et al. 2008). Moreover, an increase of oropharyngeal cancer cases has been related to HPV infections, highlighting the role played by HPV 16 as well as sexual behaviour in head and neck cancer (Chaturvedi et al. 2008; Marur et al. 2010). Despite the decline in the prevalence of smoking in industrial countries, there is no noticeable reduction in oral squamous cell carcinoma (OSCC) incidence (Shaw et al. 2011). Cancer is a disease that is perhaps more dreaded by more people than any other ailment. The prognosis, in the early stages, therefore, is favourable. The most satisfactory results are obtained when the disease is detected early and treated promptly. A sound and suggestive approach to the problem of cancer control.

Patient and methods

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A 55-year-old patient was referred by a General Medical Practitioner (GMP) regarding a one year history of recurrent lower lip swelling and infection. The patient reported having a lump on her lower lip for approximately one year. At first it was smaller in size and eventually almost occupied the whole lower lip within the one year. The patient complained of intermittent pain and dryness with occasional suppurative discharge from the lower lip. She had had frequent courses of antibiotics and at the time of initial consultation was on a course of fluconazole. The patient had a history of biopsy previously with the diagnosis of oral lichen planus in this region. Although, there had been an improvement of the symptoms after previous treatment at that time, a significant deterioration of symptoms had recurred with advanced swelling and crusting of the lower lip. According to the GMP and the patient, the lesion was worsening and had become resistant to topical medical treatment. There was no weight loss, abdominal or other systemic features observed. The patient's appetite, sleep and mood were good. The patient had also been diagnosed with mild asthma 5 years prior. The patient consumed minimal amounts of alcohol, did not use any tobacco products and most of her time was spent indoors.

Clinical examination

Extra-oral examination; there was no detectable lymphadenopathy. 20mm haemorrhagic and crusting lump present on the lower lip and tender on touch, nodular in nature.

Intra-oral examination; the oral mucosa was well lubricated and mild reticular white lines were present bilaterally on the buccal mucosa with no

oral mucosa speckling or ulceration evident. The patient wore upper and lower complete acrylic dentures. An incisional biopsy was performed on initial consultation. The incisional biopsy report of the sample taken showed moderate dysplasia but given the clinical examination and the nature of the long history of symptoms, it might have been that the biopsy represented only a particular part and very likely that there had been invasive components to the other parts of the lip. The patient was referred urgently to the Oral and Maxillofacial Surgery Department for further treatment even though the lip was healing well after the incisional biopsy.

Method of Treatment

The Oral and Maxillofacial Consultant decided to perform a lip shave of the vermilion (Kolhe & Leonard, 1988) and a tumour biopsy. This method of treatment is advisable in potentially malignant and early malignancy of small lesions and where there is no metastasis present. Involvement of the lymph nodes was not observed, thus the operative removal of the lymph node was not indicated.

The vermilionectomy, also and better known colloquially as the “ lip shave,” “ lip peel,” or “ lip scalp” operation, refers to the elliptical, horizontal excision of the exposed mucous membrane or vermilion of the lip, generally of the lower one, with resurfacing or “ retreading” of the surgically created defect by the advancement of the undermined labial mucosa, thereby providing “ fresh” covering which will tolerate many more years of wear (Kurth, n. d.). This procedure is a relatively simple, well-standardised, non-deforming plastic procedure of short duration.

After general anesthesia has been performed, surgical preparation of the field with colourless antiseptic solution is applied, and after appropriate draping, the exposed area of lip vermilion to be excised is first outlined with a methylene blue guide mark, after which the underlying tissues are locally infiltrated with Lignospan 2% (1: 80000) solution. The outlined mark is incised throughout its entire extent while the lip is firmly immobilized with the thumb and index finger of the free hand, with care being taken to make vertical rather than oblique shelving incisions so that subsequent closure will be facilitated and hypertrophic scarring prevented. After the mucosa is first elevated by sharp dissection from one corner, it can then most conveniently be removed by curved, pointed scissors down to the muscular layer. In cases of superficial malignancy, even a deeper resection can be performed without impairing the watertight closure of the lips or jeopardizing the cosmetic result. After haemostasis has been secured with 3-0 Prolene, the labial mucosa is undermined for an appropriate distance down to the deep muscular plane, the surgically created defect being closed by the advancement and approximation of this mobilized flap, which is then united to the cutaneous edge. To achieve an even and symmetrical closure three “key sutures” are first inserted, the first in the mid-portion of the lip and the remaining two bisecting the distance between the first suture and the commissures. The continuous sutures of 6-0 Prolene can then be inserted consecutively from the wound edge. The knots should not overlay the suture line so as not to retard healing. The donor site was sutured with continuous Vicryl 3. 0 suture.

The excised mucosal lesion was ellipsoid in shape with the parameters of 14mm horizontally x 20mm from superior to inferior x 8mm in depth. The mucosal excision was marked with the suture material (long stitch right-sided. Short stitch lingual) and sent for histopathological examination.

The patient was given broad spectrum antimicrobial (Amoxicillin 500mg) injections for at least 3 days postoperatively and advised to use the lips as little as possible. The wound was kept moist during the day with frequently changed dressings of sterile normal saline which contributed considerably to the patient's comfort. At night a thick layer of Aureomycin was advised, to be applied to the suture line to prevent crusting and infection. After three days the alternate sutures could be removed, and the remaining ones on the next day following the healing having progressed satisfactorily. The patient was instructed to keep the resurfaced lip well lubricated with Vaseline, lanolin, or similar preparations for quite some time postoperatively, and was also advised to avoid undue exposure to the sun.

Conclusion

Although, the patient had been primarily treated for symptomatic oral lichen planus, the condition had worsened significantly within a year. A second incisional biopsy showed moderate dysplasia. Furthermore, the history of rapid symptom progression of the lesion justified the performance of a prompt excisional biopsy under general anesthesia. The most recent hisopathological report confirmed the moderately differentiated squamous cell carcinoma diagnosis, whereas moderate dysplasia was representative of

only part of the lesion. Tumour thickness was about 4mm (exophytic and endophytic components) with focally non-cohesive invasion pattern.

The lesion was successfully removed within excision margins from 2mm to over 5mm. Nevertheless, close follow up will be continued and the necessity of radiotherapy has been considered at a multidisciplinary meeting as margin dysplasia was found of varying grades at all margins.

The “ lip shave” is thus a non-deforming plastic operation of great value in the prophylaxis and treatment of lip cancer and in the cosmetic correction of certain congenital, neoplastic, and traumatic lip deformities. (Kurth, LIP SHAVE OR VERMILIONECTOMY : INDICATIONS AND TECHNIQUE). This is obviously not a technique suitable for all lip defects, but in selected cases it gives a very satisfactory result.

Discussion

Tumours are divided into two main classes; one being benign and the other, malignant. A tumour may show any degree of malignancy, which in turn has an important bearing on the prognosis and on the prospect of successful treatment. The carcinoma is a malignant epithelial tumour. It is the commonest of all malignant tumours. Among the most important carcinomas is the squamous cell carcinoma. It grows particularly on the skin, lip, tongue, larynx, cervix, and urinary bladder. Ulcers about the mouth or lips that does not heal in ten days to two weeks is a significant sign of oral cancer. If detected early and properly diagnosed, cancer is often cured or at least controlled.

Incidences of oral cancer have been rising in many countries around the world (Saman Warnakulasuriya et al. 2008). The 5-year survival rate for oral cancer has not significantly improved in the past 30 years and remains at approximately 50% (Jemal et al. 2004). Many oral squamous cell carcinomas are preceded by clinically evident oral potentially malignant disorders (OPMDs) (Saman Warnakulasuriya, Mak, & Möller, 2007). It is very important to prevent malignant change in people diagnosed with OPMDs, but the hazard ratios of various OPMDs are not well known. OPMDs include hyperkeratosis or epithelial hyperplasia, epithelial dysplasia (Schepman et al. 1998, “ Oral Leukoplakia and Malignant Transformation”, 1984) erythroplakia (Reichart & Philipsen, 2005) and oral submucous fibrosis (Murti et al. 1985, Pindborg et al. 1984) and their clinical phenotypes are well documented. Hyperkeratosis or epithelial hyperplasia, epithelial dysplasia and OSF are the most common oral mucosal disorders in the regions where areca quid chewing is prevalent, such as India, Taiwan, and other Southeast Asian countries (Pindborg et al. 1984, Reichart & Philipsen, 2005, Lee et al. 2003, Silverman et al. 1976, Kaas et al. 1994, Chung et al. 2005). The malignant potential of oral lichen planus (OLP) remains controversial because of the absence of universally accepted diagnosis criteria (Chung et al. 2005). The malignant transformation rates of OPMDs show a great variation; for example, 10–20% of hyperkeratosis or epithelial hyperplasia, epithelial dysplasia may transform to cancer and the estimated annual rate is 1. 4%–7% (Schepman et al. 1998, “ Oral Leukoplakia and Malignant Transformation,” 1984).

In oral cavity squamous cell carcinoma (SCC) there have been many efforts to identify the factors that will allow staging in a way that accurately predicts prognosis. Many different factors have been investigated as possible predictors of outcome including patient age (Thoma et al. 2014), performance status (Rades et al. 2011) laboratory (Wittekindt P. et al. 2013) histologic grade (Arduino et al. 2008, Weijers Snow et al. 2009, Caslin R. et al. 1992, Piffkò et al. 1997, Brandwein-Gensler et al. 2005, Lindenblatt et al. 2012, Kurokawa et al. 2005), and various biomarkers (Ziober et al. 2008, Grimm, 2012). Current staging criteria from the American Joint Committee on Cancer (AJCC) for head and neck cancer rely only on tumour size, node status, and the presence of distant metastasis (TNM). Extracapsular nodal spread, positive margins, and lymphovascular invasion are used as indications for adjuvant radiation or chemotherapy but are not part of the staging criteria. Histologic grade is not included in the current staging criteria because its ability to predict a prognosis has historically been controversial (Roland et al. 1992). Although SCC staging protocol in the seventh edition of the AJCC Cancer Staging Manual seems to represent an improvement from previous editions, there are still significant shortcomings, the greatest of which is a lack of practicality. Several studies have questioned the prognostic accuracy of the TNM system for oral cancer since neither patient's comorbidity, specific tumour related factors nor multimodal treatment regimens such as preoperative radiochemotherapy (RCT) are incorporated (Kreppel et al. 2013).

Nevertheless, a strong association between conventional cytology grade and survival in patients has been stated by several investigators (Weigum et al.

2010, Editor & Kurtycz, 2011, Thomas et al. 2014). A high histologic grade in early stage oral cavity cancer is associated with poorer survival and carries independent prognostic value, in addition to tumour size, node status, and the presence of a distant metastasis (TNM) stage. Thus, histologic grade is considered clinically when making treatment decisions, and multivariable models of survival should include grade as a covariate to improve prognostic accuracy (Thomas et al. 2014). Lip tumours are usually low grade, whereas tumours from teeth to back of tongue are increasing in malignancy as we pass back (Grade 2); tumours of pharynx-high-grade malignancy (grade 3). Grading is a useful method of communication between pathologist and surgeon and is also used as a guide to treatment. Briefly, grades 1 and 2 are usually treated surgically, whereas grades 3 and 4 require radiation. Furthermore, the influence of immunological parameters on the prognosis of OSCC has already been discussed in the 1970th and 1980th [References 8, 9].

Despite the fact that oral cancer and its causes are well known to the medical and dental professions, and that the tissues of the mouth are accessible for early detection of any abnormal condition, intraoral cancer continues to present an important problem. Selection of early cancer diagnosis is often difficult, especially in some cases where early symptoms are not present or misleading such as in the present case. The gross appearance first presents a local induration, then a warty mass followed by deep infiltration. The malignant ulcer is slow-growing, hard, indurated, and invasive with round edges. It may or may not involve the lymphatic nodes.

Furthermore, the risk factors associated with these OPMDs and oral cancers have been established. Tobacco use, alcohol abuse and areca quid chewing habits are important risk factors. The associated factors in the progression of the disease and malignant transformation of OPMDs have not been well defined in previous studies: lesion type (Schepman et al. 1998, “ Oral Leukoplakia and Malignant Transformation,” 1984, Murti et al. 1985, Pindborg et al. 1984, Lumerman A. et al. 1995, Hsue et al. 2007), age (Hsue et al. 2007), lifestyle habits (Schepman et al. 1998, Hsue et al. 2007, Chen S. et al. 2000) and lesion subsites (Scully et al. 2003) were significant factors related to malignancy, but the results from different studies vary and firm conclusions cannot be drawn.

Excision of the exposed mucosa or vermilion of the lips can be safely performed even under local anaesthesia and is particularly indicated in situations requiring resurfacing of the lip, notably extensive precancerous leukoplakia or chronic solar cheilitis – the chronic sunburn of the weather-beaten “ farmer’s or sailor’s skin” or “ tropical skin” of the inhabitants of sunny climates. (Kurth, Lip Shave or vermilionectomy: indications and technique). Furthermore, according to the author the best results with local flaps are achieved in midline defects of the lower and upper lip.

References

A, M. R. L., Kaas, W., Ja, L., & Nw, J. (1994). Role of areca nut in the causation of orai submucous fibrosis•: a case- control study in Pakistan.

Allen, E. C. M., Lumerman, H., Freedman, P., & Kerpel, S. (1995). ORAL AND MAXILLOFACIAL PATHOLOGY Oral epithelial dysplasia and the development of invasive squamous cell carcinoma, *79* (3), 321-329.

Arduino, P. G., Carrozzo, M., Chiecchio, A., Broccoletti, R., Tirone, F., Borra, E., ... Gandolfo, S. (2008). Clinical and histopathologic independent prognostic factors in oral squamous cell carcinoma: a retrospective study of 334 cases. *Journal of Oral and Maxillofacial Surgery•: Official Journal of the American Association of Oral and Maxillofacial Surgeons* , *66* (8), 1570-9.

Bauer, A., Hault, K., Knuschke, P., Beissert, S., & Bauer, A. (2014). These articles have been accepted for publication in the British Journal of Dermatology and are currently being edited and typeset .

Brandwein-Gensler, M., Teixeira, M. S., Lewis, C. M., Lee, B., Rolnitzky, L., Hille, J. J., ... Wang, B. Y. (2005). Oral Squamous Cell Carcinoma. *The American Journal of Surgical Pathology* , *29* (2), 167-178.

Chung, C.-H., Yang, Y.-H., Wang, T.-Y., Shieh, T.-Y., & Warnakulasuriya, S. (2005). Oral precancerous disorders associated with areca quid chewing, smoking, and alcohol drinking in southern Taiwan. *Journal of Oral Pathology & Medicine•: Official Publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology* , *34* (8), 460-6.

Editor, S., & Kurtycz, D. F. I. (2011). The Role of Cytology in Oral Lesions•:, *40* (1), 73-83.

Grimm, M. (2012). Prognostic value of clinicopathological parameters and outcome in 484 patients with oral squamous cell carcinoma: microvascular <https://assignbuster.com/lower-lip-shave-for-squamous-cell-carcinoma-reconstruction/>

invasion (V+) is an independent prognostic factor for OSCC. *Clinical & Translational Oncology*•: Official Publication of the Federation of Spanish Oncology Societies and of the National Cancer Institute of Mexico , 14 (11), 870–80.

Hsue, S.-S., Wang, W.-C., Chen, C.-H., Lin, C.-C., Chen, Y.-K., & Lin, L.-M. (2007). Malignant transformation in 1458 patients with potentially malignant oral mucosal disorders: a follow-up study based in a Taiwanese hospital. *Journal of Oral Pathology & Medicine*•: Official Publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology , 36 (1), 25–9.

Jemal, A., Tiwari, R. C., Murray, T., Ghafoor, A., Samuels, A., Ward, E., ... Thun, M. J. (2004). Cancer statistics, 2004. *CA: A Cancer Journal for Clinicians* , 54 (1), 8–29

Kolhe, P. S., & Leonard, a G. (1988). Reconstruction of the vermilion after “ lip-shave”. *British Journal of Plastic Surgery* , 41 (1), 68–73

Kreppel, M., Dreiseidler, T., Rothamel, D., Eich, H.-T., Drebber, U., Zöller, J. E., & Scheer, M. (2013). The role of clinical versus histopathological staging in patients with advanced oral squamous cell carcinoma treated with neoadjuvant radiochemotherapy followed by radical surgery. *Journal of Cranio-Maxillo-Facial Surgery*•: Official Publication of the European Association for Cranio-Maxillo-Facial Surgery , 41 (1), 22–7.

Kurokawa, H., Zhang, M., Matsumoto, S., Yamashita, Y., Tomoyose, T., Tanaka, T., ... Takahashi, T. (2005). The high prognostic value of the

<https://assignbuster.com/lower-lip-shave-for-squamous-cell-carcinoma-reconstruction/>

histologic grade at the deep invasive front of tongue squamous cell carcinoma. *Journal of Oral Pathology & Medicine*•: Official Publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology , 34 (6), 329–33

Kurth, Lip Shave or vermilionectomy: indications and technique. *British Journal of Plastic Surgery*. 1957 Jul; 10(2): 156-62.

Lee, C.-H., Ko, Y.-C., Huang, H.-L., Chao, Y.-Y., Tsai, C.-C., Shieh, T.-Y., & Lin, L.-M. (2003). The precancer risk of betel quid chewing, tobacco use and alcohol consumption in oral leukoplakia and oral submucous fibrosis in southern Taiwan. *British Journal of Cancer* , 88 (3), 366–72.

Lindenblatt, R. D. C. R., Martinez, G. L., Silva, L. E., Faria, P. S., Camisasca, D. R., & Lourenço, S. D. Q. C. (2012). Oral squamous cell carcinoma grading systems—analysis of the best survival predictor. *Journal of Oral Pathology & Medicine*•: Official Publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology , 41 (1), 34–9.

Murti, P. R., Bhonsle, R. B., Pindborg, J. J., Daftary, D. K., Gupta, P. C., & Mehta, F. S. (1985). Malignant transformation rate in oral submucous fibrosis over a 17-year period. *Community Dentistry and Oral Epidemiology* , 13 (6), 340–1.

Oral Leukoplakia and Malignant Transformation. (1984).

Peter, F., Wittekindt, C., Finkensieper, M., Kiehntopf, M., & Guntinas-Lichius, O. (2013). Prognostic impact of pretherapeutic laboratory values in head and

neck cancer patients. *Journal of Cancer Research and Clinical Oncology* , 139 (1), 171-8.

Piffkò, J., Bànkfalvi, a, Ofner, D., Bryne, M., Rasch, D., Joos, U., ... Schmid, K. W. (1997). Prognostic value of histobiological factors (malignancy grading and AgNOR content) assessed at the invasive tumour front of oral squamous cell carcinomas. *British Journal of Cancer* , 75 (10), 1543-6.

Pindborg, J. J., Murti, P. R., Bhonsle, R. B., Gupta, P. C., Daftary, D. K., & Mehta, F. S. (1984). Oral submucous fibrosis as a precancerous condition. *Scandinavian Journal of Dental Research* , 92 (3), 224-9

Rades, D., Seibold, N. D., Gebhard, M. P., Noack, F., Schild, S. E., & Thorns, C. (2011). Prognostic factors (including HPV status) for irradiation of locally advanced squamous cell carcinoma of the head and neck (SCCHN). *Strahlentherapie Und Onkologie•: Organ Der Deutschen Röntgengesellschaft ... [et Al]* , 187 (10), 626-32

Reichart, P. a, & Philipsen, H. P. (2005). Oral erythroplakia—a review. *Oral Oncology* , 41 (6), 551-61

Roland, N. J., Caslin, a W., Nash, J., & Stell, P. M. (1992). Value of grading squamous cell carcinoma of the head and neck. *Head & Neck* , 14 (3), 224-9.

Schepman, K. P., van der Meij, E. H., Smeele, L. E., & van der Waal, I. (1998). Malignant transformation of oral leukoplakia: a follow-up study of a hospital-based population of 166 patients with oral leukoplakia from The Netherlands. *Oral Oncology* , 34 (4), 270-5.

Scully, C., & Bagan, J. (2009). Oral squamous cell carcinoma: overview of current understanding of aetiopathogenesis and clinical implications. *Oral Diseases* , 15 (6), 388–99.

Scully, C., Sudbø, J., & Speight, P. M. (2003). Progress in determining the malignant potential of oral lesions. *Journal of Oral Pathology & Medicine*•: *Official Publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology* , 32 (5), 251–6.

Shaw, R. J., Pace-Balzan, A., & Butterworth, C. (2011). Contemporary clinical management of oral squamous cell carcinoma. *Periodontology 2000* , 57 (1), 89–101.

Shiu, M. N., Chen, T. H., Chang, S. H., & Hahn, L. J. (2000). Risk factors for leukoplakia and malignant transformation to oral carcinoma: a leukoplakia cohort in Taiwan. *British Journal of Cancer* , 82 (11), 1871–4.

Silverman, S., Bhargava, K., Smith, L. W., & Malaowalla, a M. (1976).

Malignant transformation and natural history of oral leukoplakia in 57, 518 industrial workers of Gujarat, India. *Cancer* , 38 (4), 1790–5.

Thomas, B., Stedman, M., & Davies, L. (2014). Grade as a prognostic factor in oral squamous cell carcinoma: a population-based analysis of the data. *The Laryngoscope* , 124 (3), 688–94.

Warnakulasuriya, S. (2009). Causes of oral cancer—an appraisal of controversies. *British Dental Journal* , 207 (10), 471–5.

Warnakulasuriya, S. (2009). Global epidemiology of oral and oropharyngeal cancer. *Oral Oncology* , 45 (4-5), 309–16.

Warnakulasuriya, S., Mak, V., & Möller, H. (2007). Oral cancer survival in young people in South East England. *Oral Oncology* , 43 (10), 982–6.

Warnakulasuriya, S., Parkkila, S., Nagao, T., Preedy, V. R., Pasanen, M., Koivisto, H., & Niemelä, O. (2008). Demonstration of ethanol-induced protein adducts in oral leukoplakia (pre-cancer) and cancer. *Journal of Oral Pathology & Medicine*•: Official Publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology , 37 (3), 157–65.

Weigum, S. E., Floriano, P. N., Redding, S. W., Yeh, C.-K., Westbrook, S. D., McGuff, H. S., ... McDevitt, J. T. (2010). Nano-bio-chip sensor platform for examination of oral exfoliative cytology. *Cancer Prevention Research (Philadelphia, Pa.)* , 3 (4), 518–28.

Weijers, M., Snow, G. B., Bezemer, P. D., & van der Waal, I. (2009). Malignancy grading is no better than conventional histopathological grading in small squamous cell carcinoma of tongue and floor of mouth: retrospective study in 128 patients. *Journal of Oral Pathology & Medicine*•: Official Publication of the International Association of Oral Pathologists and the American Academy of Oral Pathology , 38 (4), 343–7.

Ziober, B. L., Mauk, M. G., Falls, E. M., Chen, Z., Ziober, A. F., & Bau, H. H. (2008). LAB-ON-A-CHIP FOR ORAL CANCER SCREENING AND DIAGNOSIS, (January), 111–121.

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