

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.e-jds.com

Correspondence

Contralateral lymph node metastasis of a previously-treated oral squamous cell carcinoma without neck lymph node metastasis-a rare situation deserves attention

KEYWORDS

Contralateral lymph node metastasis;
Oral squamous cell carcinoma;
Recurrence;
Pathologic neck free

Contralateral lymph node metastases (CLNM) have been considered a significant factor of poor prognosis of oral squamous cell carcinoma (OSCC). The risk factors for CLNM have been proposed according to several retrospective studies, including tumor location, size, thickness, surgical margin, histological grading, midline involvement, local recurrence, perineural and lymphovascular invasions, extranodal extensions, and clinical stage.^{1–3} The 5-year survival rate in patients with OSCC or oropharyngeal SCC (OPSCC) shows a significant gap between those with negative and positive CLNM, being 70% and 41.2% respectively.¹ Even for cases of previously-diagnosed OSCC with pathological N0 stage, multiple studies showed the incidence of recurrent CLNM is still expected with a 1–3% recurrence rate, and 95% cases are developed within 2 years.^{1,4} Here, we presented a rare case of a previously-treated OSCC without neck lymph node metastasis that developed an isolated recurrent CLNM

at the third-year follow-up and then demonstrated no recurrence for the following 15 years.

A 40-year-old male was diagnosed as having an OSCC of the right floor of mouth, cT2N0M0, stage II in December 2004. It was a unilateral ulcerative lesion, 2 × 1.2 cm in size, 8 mm in thickness, and at least 1 cm off the midline (Fig. 1A). He received wide excision, the right side type I modified radical neck dissection (MRND), and the adjuvant radiotherapy of 60 Gy over the primary and neck region for an OSCC, pT2N0M0, stage II with close margin. Disease-free condition was present during the regular follow-ups (Fig. 1B) until an isolated CLNM was found at the left neck level III in December 2007, which revealed a central necrotic morphology on computed tomography (CT) image (Fig. 1C). The left side type I MRND was performed and the pathological report revealed a metastatic SCC in line with the CT image. After this episode, no further metastasis or recurrence was noted up to date.

The occurrences of CLNM have not been widely reported. We suggest that the incidence of CLNM may be underestimated at the initial diagnosis of an OSCC due to undetected micrometastasis. The rate of micrometastasis is found to be from 6% to 46% in OSCC and OPSCC.¹ Limitation may also arise from sensitivity and specificity of imaging tools, and 25% of occult metastases are too small to be detected. Considering the risk factors for CLNM, our case fitted the previously-described four factors: location of tumor (floor of the mouth), thickness (8 mm), surgical margin (1 mm close to the resected cancer), and histological grading (poor-differentiated OSCC). Kowalski et al. found that SCCs at the floor of the mouth have the highest risk for CLNM compared to those from other oral sites.² Bier-Laning's group described that no CLNM is found in tumor SCCs with tumor

Abbreviations: CLNM, Contralateral lymph node metastasis; OSCC, Oral squamous cell carcinoma; OPSCC, Oropharyngeal squamous cell carcinoma; MRND, Modified radical neck dissection; CT, Computed tomography.

<https://doi.org/10.1016/j.jds.2022.05.019>

1991-7902/© 2022 Association for Dental Sciences of the Republic of China. Publishing services by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

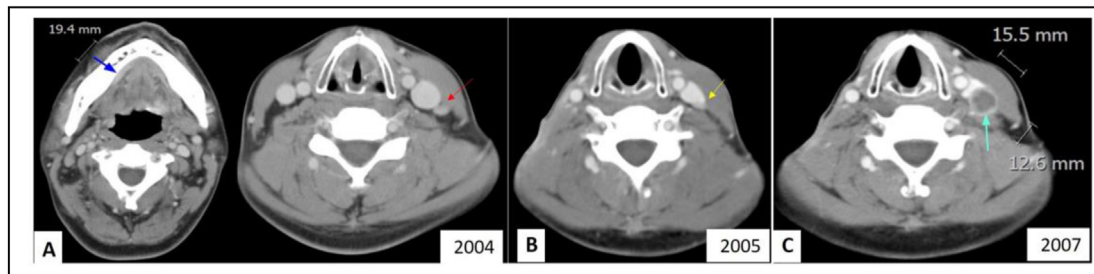


Figure 1 The series of computed tomography (CT) images with contrast medium. (A) Pre-operative CT image in 2004. The blue arrow indicated the location of the primary lesion. The red arrow marked a lymph node, ovoid in shape which was considered as normal. (B) Post-operation first-year follow-up CT image of the neck. No metastatic lesion was noted over both sides of neck. The previous lymph node, marked by yellow arrow, was still regarded as normal. (C) Post-operation third-year follow-up CT. A central necrotic lymph node, marked by the light blue arrow, at the left neck level III was found.

thickness less than 3.75 mm. There was a 5% increased risk of CLNM for every 1 mm increase in tumor thickness.⁵ For surgical margins, Capote-Moreno's group compared the rate of delayed CLNM between oral and oropharyngeal carcinomas with clear-margin (279 patients) and those with margin-involved (111 patients) groups and gave rise to a significant difference, 7% versus 14%, respectively.¹ Others investigators considered 1 cm free margin as adequate. The rates of CLNM for OSCC with free margin greater than 1 cm and for those with free margin less than 1 cm are 4% and 11.6%, respectively.³ Considering the histological grading, the risk of CLNM significantly increases with the grading, being 13.5% for poorly- and 5.2% for well-differentiated OSCCs, respectively.³ Despite the rarity of CLNM, we should pay much attention to those OSCCs with CLNM during the follow-up period.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

None.

References

1. Capote-Moreno A, Naval L, Muñoz-Guerra MF, Sastre J, Rodríguez-Campo FJ. Prognostic factors influencing contralateral neck lymph node metastases in oral and oropharyngeal carcinoma. *J Oral Maxillofac Surg* 2010;68:268–75.
2. Kowalski LP, Bagietto R, Lara JR, Santos RL, Tagawa EK, Santos IR. Factors influencing contralateral lymph node metastasis from oral carcinoma. *Head Neck* 1999;21:104–10.
3. González-García R, Naval-Gías L, Rodríguez-Campo FJ, Sastre-Pérez J, Muñoz-Guerra MF, Gil-Díez Usandizaga JL. Contralateral lymph neck node metastasis of squamous cell carcinoma of the oral cavity: a retrospective analytic study in 315 patients. *J Oral Maxillofac Surg* 2008;66:1390–8.
4. Liao CT, Huang SF, Chen IH, et al. Risk stratification of patients with oral cavity squamous cell carcinoma and contralateral neck

recurrence following radical surgery. *Ann Surg Oncol* 2009;16:159–70.

5. Bier-Laning CM, Durazo-Arvizu R, Muzaffar K, Petruzzelli GJ. Primary tumor thickness as a risk factor for contralateral cervical metastases in T1/T2 oral tongue squamous cell carcinoma. *Laryngoscope* 2009;119:883–8.

Yi-Hua Sun¹

Department of Oral and Maxillofacial Surgery, Wanfang Hospital, Taipei Medical University, Taipei, Taiwan

Chih-Yuan Fang¹

Department of Oral and Maxillofacial Surgery, Wanfang Hospital, Taipei Medical University, Taipei, Taiwan
School of Dentistry, College of Oral Medicine, Taipei Medical University, Taipei, Taiwan

Bey-Rong Guo*

Department of Oral Medicine, Wanfang Hospital, Taipei Medical University, Taipei, Taiwan

Kuan-Chou Lin**

Department of Oral and Maxillofacial Surgery, Wanfang Hospital, Taipei Medical University, Taipei, Taiwan
School of Dentistry, College of Oral Medicine, Taipei Medical University, Taipei, Taiwan

*Corresponding author. Division of Oral Medicine, Department of Dentistry, Wan Fang Hospital, Taipei Medical University, No. 111, Sec. 3, Xinglong Rd., Wenshan Dist., Taipei 116081, Taiwan.

E-mail address: brkuo8533@gmail.com (B.-R. Guo)

**Corresponding author. Division of Oral and Maxillofacial Surgery, Department of Dentistry, Wan Fang Hospital, Taipei Medical University, No. 111, Sec. 3, Xinglong Rd., Wenshan Dist., Taipei 116081, Taiwan.

E-mail address: kclin0628@hotmail.com (K.-C. Lin)

Received 14 May 2022

Final revision received 25 May 2022

Available online 9 June 2022

¹ These two authors contributed equally to this work.