this finding should be interpreted cautiously in view of the limited number of maxillary overdentures in this study. Overall, the prosthodontic maintenance requirements appear comparable with other attachment systems.[1–3] Any unplanned visits are inconvenient for patients and impact service delivery. However, when the Locator Attachment System is used, problems can often be resolved quickly and inexpensively chairside.

Conclusions

Implant-retained overdentures using the Locator Attachment System have substantial maintenance requirements. Prosthodontic complications associated with these prostheses are usually simple to resolve.

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Literature Abstract

Detection of oral squamous cell carcinoma and cervical lymph node metastasis using activatable near-infrared fluorescence agents

In head and neck cancer, it is important to be able to assess that the tumor is completely removed and has tumor-free margins during surgery. Currently, surgeons have to rely on the visual appearance and palpation of the tumor and cervical lymph nodes to determine if the tumor has been completely removed. This method is not reliable, as involved surgical margins have been described in 16% of clinically radically resected oral and oropharyngeal squamous cell carcinoma specimens. Therefore, new intraoperative visualization techniques are required to assess tumor margins in real time. The aim of this study was to determine if it was feasible to utilize optical imaging using near-infrared fluorescence (NIRF) agents to detect oral cancer and cervical lymph node metastasis in vivo. Luciferase-expressing OSC-19-Luc cells were injected into the tongues of female nude mice. Physiologic saline solution was injected into the tongues of the control mice. Tumor growth was followed by bioluminescence imaging. After 3 weeks, the animals were randomly allocated to intravenously receive ProSense 680 or MMPSense 680 (NIRF agents). Fluorescence imaging of the mice was performed, and the tumor-to-background ratio (TBR) was determined histologically. Results showed that the fluorescence signals in the tongue tumors and cervical lymph node metastases were significantly higher than that in the controls. The mean TBR of ProSense 680 in the tongue and lymph nodes was 15.8 and 11.8, respectively. The mean TBR of MMPSense 680 in the tongue and lymph nodes was 18.6 and 10.5, respectively. This study demonstrated the feasibility of using optical imaging to detect two activatable NIRF agents, ProSense 680 and MMPSense 680, to detect tongue tumors and cervical lymph node metastases. This indicates the potential for using NIRF agents for real-time image-guided surgery to ensure the complete removal of oral tumors.

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