

## Dual-isotope SPECT diagnosis of a skull-base metastasis causing isolated unilateral hypoglossal nerve palsy

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We describe a 48-year-old female with an isolated unilateral hypoglossal nerve palsy caused by a skull base metastasis from breast cancer. The patient had a medical history of conservative breast therapy for breast cancer. Although the cause of such a neurological deficit includes various pathologies, the reports focusing on metastatic tumor have been limited in number. Radiologic investigation showed a mass involving both the right hypoglossal canal and the clival edge. Swelling of the hypoglossal nerve was observed in views including its canal. Three-dimensional CT images demonstrated the tumor protruding from the enlarged external orifice of the hypoglossal canal. In the present report we mentioned a nuclear medicine procedure to visualize and characterize the small, abnormal tissue in the skull base. Dual-isotope SPECT confirmed an abnormal uptake of  $^{99m}\text{Tc}$ -HMDP around the hypoglossal canal and a  $^{201}\text{Tl}$ -positive elongated lesion running along the hypoglossal nerve.

**Key words:** hypoglossal nerve palsy, metastasis, breast cancer, SPECT, Tc-99m HMDP, Tl-201 Chloride.