CASE STUDY

Bilateral Metastasis in the Internal Auditory Canal of Malignant Melanoma

Metástasis bilateral en conducto auditivo interno de melanoma maligno

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Clinical Case

A male aged 35 with no personal history of interest, who was diagnosed with an intradermal melanocytic tumour on his back. After surgical removal of the tumour with surgical free margins, the tumour was 1 mm deep and had not spread to the reticular dermis. Ki-67: 30%–35%.

Three years later the patient consulted due to a painful left axillary tumour and hematurias. The PET/CT scan showed images suggestive of malignancy in the armpit, internal mammary chain and bladder. The bladder tumour was removed, and axillary clearance performed with the histopathological outcome of metastases from melanoma. Treatment then commenced with interferon alpha and the patient was referred to our service for ancillary radiotherapy (RT). During this treatment the patient suffered from vertigo, persistent dizziness and deafness. The NMR of the brain showed a 7 mm nodular image located in the right frontal subcortical white matter right there was bilateral nodular enhancement in the IAC compatible with metastasis (Figs. 1 and 2). It was decided to start treatment with holo-cranial RT PTY of 10 × 300 cGy and combined with radiosurgery with 14 Gy, at the 90% isodose in one fraction.

Cauda equine syndrome began after finalising treatment, with the existence of a leptomeningeal dissemination being apparent in the NMR, and palliative RT treatment therefore followed in the said area, with the administration of a 20 Gy dose in 5 fractions of 400 cGy each. Clinical improvement ensued. A few days later the patient was admitted to hospital again due to neurological impairment and died as a result of the disease, following a 4-year survival.

Discussion

Melanomas have a high tendency to metastasise in CNS,¹ but location in the IAC is extremely rare.²

To date only 17 cases of metastases in CPA and IAC have been described in the literature and only occasionally have these been reported as isolated or bilateral.

Bilateral cerebellopontine angle tumours³ are typical of type II neurofibromatosis and are usually facial schwannomas and neurinomas.⁴

Standard clinical presentation of malignant tumours in this location are characterised by sudden onset of deafness (unlike benign tumours where loss of hearing is usually progressive), vestibular symptoms, cochlear dysfunction and facial nerve compromise. Our patient presented with standard medical signs of malignant tumours in this loca-
NMR is the imaging technique of choice for diagnosis, where generally a typical pattern of hyperintensity is present in T1 and hypointensity in T2, enhanced after the administration of gadolinium, with the exception of the non-melanocytes which are isointense in T1 and hyperintense in FLAIR sequences. Other authors communicate a less typical pattern in NMR presenting as hypointense both in enhanced images in T1 and T2.

The interval between diagnosis and the appearance of metastasis in the cerebellopontine angle or IAC, is 7 years and mean survival after diagnosis of metastases continues to be very poor.

Treatment options include surgery, systemic or intratantal chemotherapy, new molecular agents and radiotherapy. RT has been proven to be beneficial in delaying recurrence after complete resection, but not for prolonging survival. Stereotactic surgery has been reported to lead to survival of 22 months, although only in selected patients. The mean survival rate after holo-cranial RT is 2–5 months.

To conclude, bilateral metastasis of malignant melanoma in the IAC is extremely rare, and few cases have been published in the literature. It is characterised by its rapid progression and poor survival. NMR is the imaging technique of choice for diagnosis and surgery. Chemotherapy, biological therapy and RT are possible treatments.

**Conflict of Interests**

The authors have no conflict of interests to declare relating to the publication of this article.

**References**