

## **Osteoradionecrosis of external auditory canal in nasopharyngeal carcinoma.**

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**BACKGROUND:** Osteoradionecrosis (ORN) is one of the most serious complications of radiotherapy of nasopharyngeal carcinoma (NPC). ORN rarely occurs in the external auditory canal. **METHODS:** This is a retrospective review of 11 NPC patients who had ORN in the external auditory canal. Exposed necrotic bone over the external auditory canal was the diagnostic hallmark. Three patients wore hearing aids and 2 had had previous otological surgery. ORN was detected between 2 and 15 years after radiation therapy (mean 8 years). The radiation dose ranged from 6480 to 8460 rads in 8 patients. **RESULTS:** The symptoms of external auditory canal ORN were crust (100%), otorrhea (91%), otalgia (91%), hearing impairment (73%), foul odor (45%) and retroauricular discharging fistula (9%), all of which mimicked those of chronic otitis media. After treatment, the diagnoses of 2 patients were rectified to external auditory canal malignancy and external auditory canal cholesteatoma, and the other 9 (82%) patients' diagnoses remained as ORN. After combined treatment with local cleansing, hyperbaric oxygen therapy, sequestrectomy and ear drops, resolution of symptoms was achieved in all the patients. Three patients who underwent sequestrectomy were free of disease. **CONCLUSIONS:** External auditory canal ORN is rare in NPC patients. The clinical presentation mimics that of chronic otitis media and differentiation is difficult. The disease is prone to occur in patients who wear hearing aids or have had previous surgery. A high index of suspicion is mandatory for early diagnosis. The disease may lead to disastrous complications and should never be neglected by clinicians.

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