

Aboriginal Head and Neck Cancer Patients Have Different Patterns of Metastatic Involvement, and Have More Advanced Disease at Diagnosis

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Abstract : Introduction: The mortality gap in Aboriginal Head and Neck Cancer is well known, but the reasons for poorer survival are not well established. Aim: We aimed to evaluate the locoregional and metastatic involvement, and stage at diagnosis, in Aboriginal compared with non-Aboriginal patients. Methods: We performed a retrospective cohort analysis of 320 HNC patients from a single centre in Western Australia, identifying 80 Aboriginal patients and 240 non-Aboriginal patients matched on a 1:3 ratio by sites, histology, rurality, and age. We collected data on the patient characteristics, tumour features, regions involved, stage at diagnosis, treatment history, and survival and relapse patterns, including sites of metastatic and locoregional involvement. Results: Aboriginal patients had a significantly higher incidence of lung metastases (26.3% versus 13.7%, $p=0.009$). Aboriginal patients also had a numerically but non-statistically significant higher incidence of thoracic nodal involvement (10% vs 5.8%) and malignant pleural effusions (3.8% vs 2.5%). Aboriginal patients also had a numerically but not statistically significantly higher incidence of adrenal and bony involvement. Interestingly, non-Aboriginal patients had an increased rate of cutaneous (2.1% vs 0%) and liver metastases (4.6% vs 2.5%) compared with Aboriginal patients. In terms of locoregional involvement, Aboriginal patients were more than twice as likely to have contralateral neck involvement (58.8% vs 24.2%, $p<0.00001$), and 30% more likely to have ipsilateral neck lymph node involvement (78.8% vs 60%, $p=0.002$) than non-Aboriginal patients. Aboriginal patients had significantly more advanced disease at diagnosis ($p=0.008$). Aboriginal compared with non-Aboriginal patients were less likely to present with stage I (7.5% vs 22.5%), stage II (11.3% vs 13.8%), or stage III disease (13.8% vs 17.1%), and more likely to present with more advanced stage IVA (42.5% vs 34.6%), stage IVB (15% vs 7.1%), or stage IVC (10% vs 5%) disease ($p=0.008$). Number of regions of disease involvement was higher in Aboriginal patients (median 3, mean 3.64, range 1-10) compared with non-Aboriginal patients (median 2, mean 2.80, range 1-12). Conclusion: Aboriginal patients had a significantly higher incidence of lung metastases, and significantly more frequent involvement of ipsilateral and contralateral neck lymph nodes. Aboriginal patients also had significantly more advanced disease at presentation with a higher stage at diagnosis. We are performing further analyses to investigate explanations for these findings.

Keywords : head and neck cancer, Aboriginal, metastases, locoregional, pattern of relapse, sites of disease

Conference Title : ICHNO 2023 : International Conference on Head and Neck Oncology

Conference Location : Barcelona, Spain

Conference Dates : October 23-24, 2023