

**OP03**

**Head and neck cancers: epidemiology, diagnosis and treatments**

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*Introduction:* Head and neck cancers (HNC) affect many subsites in the upper aero-digestive tract. The risk factors include tobacco smoking, chewing betel nut/paan, excessive alcohol consumption, hereditary factors and viruses such as human papillomavirus (HPV) and Epstein–Barr virus (EBV). Early diagnosis, lifestyle changes and HPV vaccination will improve survival.

*Epidemiology:* Globally, recent estimates from GLOBOCAN shows there are 890,000 cases of head and neck cancers annually and 450,000 deaths annually (1). There is an increasing incidence of oral cavity, lip, buccal cancers in the developing world due to higher consumption of

tobacco, alcohol and chewing areca nut. There has been an increasing incidence of some HNC due to high-risk strains of human papillomavirus (HPV) (2). Cancers caused by HPV include tonsil cancer, tongue base cancer and unknown primary cancers. The EBV causes nasopharyngeal cancers especially in the Far East. There is a decreasing incidence of some cancers caused by smoking such as laryngeal and hypopharyngeal cancers mainly due to the reduction in smoking rates in some developed countries.

Overall, there is a predicted increase in HNC of up to 30% annually by 2030 (2). The HPV-associated cancers affect mainly younger males, who do not necessarily smoke or drink alcohol. The HPV is a strong prognostic factor so patients with HPV positive cancers respond better to treatment as there are less genetic mutations when compared to cancers driven by tobacco smoking. These trends are alarming with socioeconomic impacts.

*Diagnosis:* Symptoms of HNC include difficulty swallowing, persistent sore throat, difficulty breathing, hoarseness, neck lumps, referred pain to the ear, weight loss, and systemic symptoms in advanced disease. A full ENT examination is performed of the oral cavity, oropharynx, neck and ideally flexible nasendoscopy. Ultrasound-guided FNAC or core biopsy of neck lumps are performed. Cross-sectional imaging with CT or MRI scans followed by tumour biopsies either under local or general anaesthetic.

Tumour biopsies are assessed using H&E stains, and tests for HPV detection (p. 16 immunohistochemistry, in situ hybridisation or polymerase chain reaction). A PETCT scan is useful for staging cancers, identifying the origin of unknown primary cancers and for surveillance.

*Treatments:* The head and neck cancer multidisciplinary team reviews all investigations and recommends either curative or palliative treatment options that are in every patient's best interests.

Surgery can be open, endoscopic or with the use of a robot. Microvascular reconstruction with flaps is performed as necessary to improve function and quality of life. Oncologic treatments include intensity-modulated radiotherapy (IMRT), which can be combined with chemotherapy. Immunotherapy is a second-line treatment for recurrent HNC currently. Advanced cancers can be treated with palliative intent or best supportive care especially if the patients are frail and have significant comorbidities.

There are ongoing clinical trials and research studies exploring better, less-toxic treatments. Multiomics approach and artificial intelligence are exciting developments.

*Conclusion:* There is an increasing incidence of some HNC especially cancers driven by tobacco smoking, alcohol consumption and high-risk human papillomaviruses. Smoking cessation, HPV vaccination, early diagnosis and improvements in treatments are important factors in ensuring good outcomes.

## References

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