

headandneck 5000

A descriptive analysis of maxillary and paranasal sinus tumours from Head and Neck 5000

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Scientific Outline

Summary

Background:

Primary tumours of the paranasal sinuses are rare. They account for less than 5% of head and neck cancers but estimates of their true incidence are difficult because they are often reported in combination with nasal cancers. Together, sinonasal cancers have an incidence of between 2 and 10 per million, with men being affected more than women (1). There are well-established links with occupational exposure to wood dust and other industrial agents as well as tobacco smoking in the aetiology of these cancers. The maxillary sinus is the most commonly affected site, followed by the ethmoid sinus. (2)

Cancers and treatments at these anatomical sites have the potential to cause significant morbidity. Because of the potential for relatively unimpeded growth at an early stage, these tumours often present late with signs of involvement of the orbits, soft tissue spaces of the face, or neurological changes. Ablative surgery may involve vital structures (including the eye) while radiotherapy can have long-term negative effects. The 5-year survival rates associated with cancer of the paranasal sinuses have been reported to be between 44 and 62%. (3)

The literature is, however, relatively devoid of descriptions of these cancers. Combined reports of 'sinonasal' disease may miss important differences in risk factor exposure and/or outcomes between different sites. In addition, it is likely that some primary sinus tumours are misreported as maxillary tumours with sinus involvement (or vice versa). There is a need, therefore, for descriptive analyses that provide an overview of this health problem in the United Kingdom.

Aim:

To produce a descriptive analysis of baseline and outcome data among those participants in the Head and Neck 5000 cohort presenting with a primary tumour of the paranasal sinuses

Proposed methods:

The Head and Neck 5000 database will be searched to identify cases of primary paranasal sinus cancer (ICD-10 C31, 'accessory sinuses').

Baseline demographic data will be entered into contingency tables for analysis using STATA (ReleaseCorp, TX, USA) to determine the frequencies of individual variables. Variables of interest will include age, gender, smoking & alcohol history, occupational history, co-morbidities, tumour stage, histological type, lymph node involvement (if recorded), treatment, and loco-regional or distant recurrence and mortality at 12 months. Where required, the original reporting pathologist will be contacted to confirm the primary tumour site (for example, to distinguish true primary sinus tumours from those arising at other sites but involving the sinus).

Descriptive analyses will provide an overview of primary paranasal sinus cancers in the United Kingdom that has not been reported to date. This will help inform discussions with patients and highlight areas of focus for future research.

Summary:

Cancers affecting the air spaces (sinuses) around the nose are rare and affect fewer than 10 people per million each year. When they do arise, they often become obvious only once the disease is at an advanced stage which means that treatment is complex, can involve important structures including the eye, and may not be successful at curing the disease. Around half of people diagnosed with cancer in the sinuses will be alive after five years.

Few studies have collected good quality data about people with sinus cancers from the point of diagnosis. The Head and Neck 5000 project includes people with tumours at these sites and analysis of the data will provide important new information about how they are treated and what happens following treatment in the United Kingdom. The results will help guide information provided to patients diagnosed with sinus cancer as well as highlighting areas requiring further research.

References:

1. Youlden D, Cramb SM, Peters S et al. International comparisons of the incidence and mortality of sinonasal cancer. *Cancer Epidemiology* 2013; 37: 770-779
2. Bossi P, Farina D, Gatta G, Lombardi D, Piero N, Orlandi E. Paranasal sinus cancer. *Critical Rev Oncol Haematol* 2016; 98: 45-61
3. Dulguerov P, Jacobsen MS, Allal AS, Lehmann W, Calcaterra T. Nasal and paranasal sinus carcinoma: are we making progress? *Cancer* 2001; 92: 3012-3029