INCIDENCE AND OUTCOME OF HEAD AND NECK MUCOSAL MELANOMA – A POPULATION-BASED SURVEY FROM NORTHERN FINLAND

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Received 6 September 2006, Accepted 30 October 2006

ABSTRACT

Objectives. To characterize incidence, clinical characteristics and outcome of head and neck mucosal melanoma in a recent, population-based patient series.

Study design. Retrospective survey.

Methods. A population-based, descriptive study with patients diagnosed in Northern Finland between 1983 and 2001. Age-adjusted incidence rates standardised to the world population and 2-, 5- and 10-year survival rates were calculated.

Results. Sixteen patients were identified, yielding an age-adjusted incidence rate of 0.08 per 100,000 per year. Almost 90% of the patients presented with localized (stage I) disease. Despite that, 13 patients died during the follow-up, 10 of them because of melanoma. The median survival time after diagnosis was 46 months. Five-year actuarial survival rate was 37% and the 5-year disease-specific survival rate 56%.

Conclusions. Prognosis of head and neck mucosal melanoma remains poor, despite favourable stage distribution at presentation. (Int J Circumpolar Health 2006;65(5):443-447)

Keywords: mucosal melanoma, head and neck, incidence, survival
INTRODUCTION

The etiology of primary mucosal melanoma is unknown. In the head and neck region, mucosal melanoma usually affects mucosa of ectodermal origin, such as oral or sinonasal mucosa, and is rare in the nasopharynx and larynx, where epithelia are of endodermal origin (1). Because of its rarity and poor prognosis, head and neck mucosal melanoma (HNMM) forms a difficult diagnostic and therapeutic entity. Thus, studies on its incidence, clinical characteristics, natural history and prognosis are warranted. Most reports on the subject are derived from hospital-based materials: instead of true incidence rates, only the relative proportion of HNMM among all melanoma cases is usually reported (1,2). In a Cancer Registry-based study from the 1950’s and 1960’s, HNMM was estimated to represent 0.01% of all malignant tumours in Finland (3). This would mean only 2 new annual cases in Finland and, thus, it is clearly an underestimate. Unfortunately, more recent cancer registry data on the HNMM incidence rate in Finland has not been published. Outcome in HNMM is poor, even though at presentation, 80% of the patients have a local, stage I disease (4). The 5-year survival rates have varied between 14 and 44 percent (1,4), depending on the clinical stage at the time of diagnosis and the anatomical site of the primary tumour. In this population-based, retrospective survey from Northern Finland, we present a recent patient series with HNMM, and describe its epidemiology, clinical history and outcome.

MATERIAL AND METHODS

All patients diagnosed at the Oulu University Hospital, Finland, with histologically verified primary mucosal melanoma of the head and neck between 1 January 1983 and 31 December 2001 were included in the study. Oulu University Hospital is the tertiary head and neck center in Northern Finland, and all HNMM patients of the region are treated and followed-up there. The patients were identified from the surgical, radiotherapy and discharge registers of the hospital. Tumours were staged according to the UICC TNM classification (5). The cause and date of death data were obtained from Statistics Finland in November 2002.

Data were gathered on the following patient demographics and clinical characteristics: patient’s age and sex, duration and nature of initial presenting symptom, location, pigmentation and multicentricity of tumour, clinical stage at the time of diagnosis (stage I = localized, stage II = spread to regional nodes, stage III = distant metastasis), treatment (mode, curative vs. palliative), histological resection margins at operation, recurrence or delayed metastasis, and cause and date of death data. Permission to collect these data was granted by the Finnish Ministry of Social Affairs and Health.

Statistical analyses
Age-adjusted incidence rates were calculated standardised to the world population. Actuarial and disease-specific survival rates were calculated for 2, 5 and 10 years.
RESULTS

Sixteen patients were diagnosed with primary HNMM during the 19-year study period, giving an overall age-adjusted incidence rate of 0.08 per 100,000 person years. The incidence rate was higher in women (0.11 vs. 0.04) and among elderly (0.64 vs. 0.04 for patients over and under 65 years, respectively). Mean age was 65 years (range 36-81 years) and 11 patients (69%) were females. Only 3 patients (19%) were former or present smokers. Sinonasal location prevailed.

Table I. Patient and clinical characteristics of 16 patients with mucosal head and neck melanoma.

|                       | Sinonasal melanoma (n = 11) | Oral melanoma (n = 5) |
|-----------------------|-----------------------------|-----------------------|
| Mean age, yrs (range) | 70 (59-81)                  | 52 (36-74)            |
| Female sex            | 7 (64 %)                    | 4 (80 %)              |
| Initial symptom       |                             |                       |
| Nose obstruction      | 8/11 (73 %)                 | Asymptomatic pigmentation 3/5 (60 %) |
| Epistaxis             | 1/11 (9 %)                  | Mass of maxillary alveolus 1/5 (20 %) |
| Sinusitis             | 1/11 (9 %)                  | Oral bleeding 1/5 (20 %) |
| Maxillary mass        | 1/11 (9 %)                  |                       |
| Duration of symptom   | 20 months                   | 2 months              |
| Location              |                             |                       |
| Nasal cavity only     | 4 (36 %)                    | Oral mucosa 4 (80 %)  |
| Nasal cavity and nasopharynx | 3 (27 %)            | Lip 1 (20 %)         |
| Nasal cavity and maxillary sinus | 4 (36 %)          |                       |
| Multicentricity       | 5 (45 %)                    | 2 (40 %)              |
| Pigmentation          | 10 (91 %)                   | 4 (80 %)              |
| Clinical stage:       |                             |                       |
| Stage I (localized)   | 11 (100 %)                  | 3 (60 %)              |
| Stage II (spread to regional nodes) | 1 (20 %)            |                       |
| Stage III (distant metastasis) | 1 (20 %)             |                       |
| Treatment             |                             |                       |
| Curative intent       | 7 (64 %)                    | 4 (36 %)              |
| Palliative            | 4 (80 %)                    | 1 (20 %)              |
| Histological resection margins |             |                       |
| (in primary surgery)  |                             |                       |
| Positive              | 1                           | Positive 1            |
| Negative              | 8                           | Negative 3            |
| Unknown               | 2                           | Unknown 1             |
| Recurrence or delayed |                             |                       |
| distant metastasis b  | 6/7 (86 %)                  | 1/4 (25 %)            |
| 5-year actuarial survival rate | 27 %                       | 60 %                  |

\(^a\) Calculated among symptomatic patients (n = 13).

\(^b\) Calculated among patients treated with curative intent (n = 11).
over oral location (69% vs. 31%) (Table I). At presentation, 14 patients (88%) presented with localized (stage I) disease. At the time of diagnosis, spread to local lymph nodes (stage II) was present in one (6%) and distant lung metastasis (stage III) in one (6%) patient.

Mean duration of symptoms was 16 months (range 1-60 months). All sinonasal tumours were symptomatic and were the cause of the medical consultation leading to melanoma diagnosis. On the other hand, three patients with oral diagnosis were asymptomatic and were incidentally diagnosed during a medical visit because of another ailment. Among the symptomatic patients, patients with oral melanoma sought help more rapidly (mean duration of symptoms 2 months vs. 20 months).

In 13 patients (81%), histological resection margin data from the primary surgery was obtainable from the charts. In 11 patients (69%), the margins were negative (i.e., cancer was entirely removed and resection margins were clear of tumour cells), and in 2 (13%) they were positive (residual cancer cells remain, compromised radicality) (Table I).

Among eleven (69%) patients treated with curative intent (radical surgery, with or without radiotherapy), seven (64%) experienced a local recurrence with a mean disease-free time of 25 months (range 6 months to 6 years) and one additional patient developed a delayed neck metastasis 4 years after the primary diagnosis. Among the seven patients with local recurrence, four (57%) presented later with distant metastases (neck, liver, brain and bone, with a time range of 16 months to 5 years after the local recurrence). For five patients (31%), only palliation was administered, and they have all succumbed to the disease.

During a follow-up of 2-121 months (mean 50 months), 13 patients (81%) died, 10 of them due to melanoma. Median survival time after diagnosis was 46 months (mean 48 months, range 2-120). Overall actuarial 2-year, 5-year and 10-year survival rates were 62%, 37% and 19% and the disease-specific survival rates 75%, 56% and 37%, respectively. At the time of the data gathering (November 2002), one long-term survivor (>10 years) was living.

**DISCUSSION**

In this study, the incidence rate of primary HNMM was as low as 0.08/100,000 per year. In comparison, incidence rates (per 100,000 per year) in Northern Finland during the same period were 3.8 for laryngeal cancer among males and 0.6 among females (6), and 0.9 for pharyngeal cancer (7). Still, the incidence rate reached in this study was higher than those based on national registries (3,8).

A typical patient was a non-smoking elderly female with sinonasal, localized and pigmented lesion. Patients with sinonasal HNMM had had symptoms for a longer period, the most common presenting symptom being nasal obstruction, whereas oral HNMM was usually relatively asymptomatic. Patients with oral disease also tended to be younger than those with sinonasal melanoma.

In accordance with this study, earlier reports have found HNMM to be, in general, relatively evenly distributed between sinonasal and oral locations (4). Among sinonasal tumours, nasal cavity (inferior and middle turbinates and septum) prevails, and 20% originate in the sinuses (4). In the mouth, the
hard palate and maxillary alveolar crest are the predominating subsites (8,9). Similarly, in accordance with our findings, neck metastases (stage I) at presentation are more common in oral melanoma (4).

We found the outcome of HNMM to be poor, despite a favourable stage at presentation. As reported before (10), this was due to local recurrences and delayed distant metastases, even after seemingly successful treatment, or years of disease-free time. However, survivors do exist; one is still living free of disease after more than 10 years following the diagnosis. Thus, radical treatment with curative intent is warranted, despite the miserable overall prognosis.

Acknowledgements
Pasi Hirvikoski, MD, from the Department of Pathology, Oulu University Hospital, helped in reviewing the histo-pathological specimens.

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