Epidemiology of Oral and Pharyngeal Cancer in Children and Adolescents

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Introduction

The age of oral and pharyngeal cancer patients has been reported to decrease during the last decade. Therefore, more attention is given to young adults' epidemiology. Despite that, most of the peer-reviewed literature among 0-19 year of age (yoa) is limited to specific tumor sites and/or tumor types, and mostly presents limited number of individual cases.

Objectives

Our aim was to characterize oral and pharyngeal cancer in children and adolescents in order to provide a better understanding about this disease among this age group.

Methods

Data about oral and pharyngeal cancer diagnosis was derived from the Israel National Cancer Registry. The data included the patients' age, gender, tumor site and tumor type.

Two age groups were created, based on the median age. For statistical needs, the total period was dichotomized into two sub-periods: 1970-1990 and 1991-2011. Data analysis was performed by using IBM SPSS (version 21) and Winpepi (version 11.50). Significance level determined at α=0.05. The research was approved by the Institutional Review Board of the Hadassah Hospital in Jerusalem, Israel.

Results:

Out of all Oral and pharyngeal cases (N=13,863), a total of 357 cases (2.6%) were diagnosed, with boys to girls ratio of 1.5:1.

The nasopharynx was the leading tumor site category (42.3%) followed by the salivary glands (20.5%), which were more frequent among 14-19yoa. The tonsils and other pharyngeal sites were frequent among 0-13yoa (Table 1).

The diagnosis average of the parotid glands increased during 2001-2011. The most frequent tumor type categories were Lymphoma (20.7%) and Carcinoma subtypes (19.9%) (Figure 1).

Throughout the period, the diagnosis rates decreased during 1991-2006 (Figure 2) and were not significantly different between boys and girls.

Conclusions:

The general characteristics of the disease were actually unchanged during the 4 decades period, implying that environmental factors may have smaller effect.

Boys might have a genetic predisposition for nasopharyngeal malignancy. Health care providers should be aware of the common sites and tumor types among children and adolescents.

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