

CORRESPONDENCE

Cigar Smoking and Cancers of the Upper Digestive Tract

Cigar smoking has been rising over the past few years, mainly in North America, but its health consequences have been quantified only recently (1,2). With reference to lung cancer, in several case-control studies conducted in the 1960s and 1970s, summarized by Higgins et al. (3), the odds ratios (ORs) for cigar smokers ranged between 2 and 5. A cohort investigation, based on a sample of 25 000 Swedish men (4), gave a relative risk (RR) of lung cancer of 7.6 for current cigar smokers as compared with never smokers.

The difference between cigarette and cigar smoking is generally considered most marked with respect to lung cancer and less marked with respect to cancers of the mouth, pharynx, and esophagus (2,4). Much less information, however, is available on these cancer sites because most studies combined cigar with cigarette or pipe smokers. The Swedish cohort study (3) gave an RR for cigar smokers of 0.6 for oral cavity and pharyngeal cancers and of 6.5 for esophageal cancer on the basis, however, of only one and two cases. The Cancer Prevention Study-I (CPS-I) (2), on the basis of 25 deaths from oral and pharyngeal cancers, gave RRs of 7.9 for ever cigar smokers and of 15.9 for heavy (>5 per day) cigar smokers. Corresponding figures for esophageal cancer, on the basis of 19 deaths, were 3.6 for ever cigar smokers and 5.2 for heavy cigar smokers (2).

We have, therefore, considered the risk of cancers of the upper digestive tract in individuals who had smoked only cigars as compared with lifelong nonsmokers; we used data from a case-control study conducted in Italy and Switzerland (5,6). Briefly, between 1984 and 1997, data were collected by trained interviewers on 1090 men with incident, histologically confirmed cancers of the oral cavity and pharynx and 343 men with such cancers of the esophagus who were admitted to a network of hospitals in the greater Milan

Table 1. Distribution by cigar-use status of 59 male case patients with cancers of the oral cavity, pharynx, and esophagus and 801 male control subjects who never smoked cigarettes or pipes with corresponding odds ratios*—data collected in Italy and Switzerland, 1984–1997

	Case patients		Control subjects		OR (95% CI)†
	No.	%	No.	%	
Cigar smoking					
Never	50	84.7	788	98.4	1‡
Ever	9	15.3	13	1.6	6.8 (2.5–18.5)
>3 cigars per day	4	6.8	5	0.6	8.9 (2.1–36.9)
Current only	7	11.9	5	0.6	14.9 (4.0–55.9)

*Derived from unconditional multiple logistic regression equations, including terms for study center, age, alcohol consumption, and education. The assumptions of multiple logistic regression analysis were met.

†OR = odds ratio; CI = confidence interval.

‡Reference category.

area, the northern Italian province of Pordenone, and the Swiss Canton of Vaud. Control subjects were 3070 men admitted to the same network of hospitals for acute, non-neoplastic conditions that were unrelated to alcohol or tobacco consumption. Information on smoking habits included smoking status, type of product smoked, quantity of tobacco smoked, and duration of being a smoker. Ever cigarette and pipe smokers were excluded from this analysis, leaving a total of 59 case patients (36 with oral and pharyngeal cancers and 23 with esophageal cancer) and 801 control subjects.

Nine (15.3%) of the 59 case patients and 13 (1.6%) of the 801 control subjects were ever cigar smokers. The corresponding OR obtained by unconditional multiple logistic regression—after allowance for study center, age, alcohol consumption, and education—was 6.8 (95% confidence interval [CI] = 2.5–18.5). The ORs were 8.9 (95% CI = 2.1–36.9) for smokers of more than 3 cigars per day and 14.9 (95% CI = 4.0–55.9) for current cigar smokers (Table 1). The ORs for ever cigar smokers were 9.0 (95% CI = 2.7–30.0) for oral and pharyngeal cancers and 4.1 (95% CI = 0.7–23.0) for esophageal cancer.

The present data, therefore, provide quantitative evidence that cigar smoking is strongly related to cancers of the upper digestive tract, even in men who have never smoked cigarettes or pipes.

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