

LETTERS TO THE EDITOR

Dear Editor,

Alaeddini and his coworkers (Oct 2001 issue)¹ published the results of a case control study about the type of food and beverage consumption in patients with esophageal cancer (EC) in North-East of Iran. Although they did not mention whether all of their patients had squamous cell carcinoma (SCC) or some had adenocarcinoma of distal esophagus, they concluded that there were no significant difference between the case and control groups in respect to the age, sex and ethnic origin. The case group showed significant differences in family history of cancers other than EC, history of gastroesophageal reflux, the habit of rapid drinking of hot tea, and eating of hot food. These factors were found to be related to the presence of EC, whereas eating cheese, vegetables, fresh fruits, black pepper and turmeric were found to be protective factors.

Although some of these findings have been reemphasized in the most recent review of esophageal cancer in Iran,² many other questions still remain unanswered. History of gastroesophageal reflux disease (GERD) as a predisposing factor for EC, reported in this study, had not been reported in previous Iranian studies and seems to be due to the inclusion of patients with adenocarcinoma of distal esophagus in their series because GERD is a definite risk factor for adenocarcinoma of distal esophagus. Furthermore, in many cases of gastric cardiac lesions, the tumor extends to the distal esophagus and may mimic primary esophageal adenocarcinoma, if not properly studied by the clinician.³

Family history of cancer other than EC is also interesting because a positive family history of EC was reported as a risk factor in some other studies from Iran and elsewhere.⁴ Recently in a similar case control study (in press, Iranian Journal of Medical Council) we investigated the dietary and social habits of patients with biopsy-proven SCC of esophagus. A total of 90 patients and 180 sex and age (± 3 years) matched controls were enrolled in the study. Information regarding the cases including 45 questions and variables were collected by interviewing the patients in the Outpatient Clinic of Ghaem Hospital. Some patients was unable to participate in the interview

or recall his past dietary or social status the data were obtained from the most relatives living with the patient. All subjects were inquired about variables such as history of EC in first and second degree family members, cigarette and water pipe smoking and esophageal reflux. The type of bread and amount of dairy products consumed daily as well as the amount of dried whey, red meat, fowl meat, fish, fresh vegetables, pickles, canned food, citrus fruit, fresh fruit, various edible oils, food additives and leftover food were also investigated. The subjects were also questioned about how tea and cooked food were consumed (hot /cold). Data were obtained regarding the cases' dietary habits prior to the development of signs of the disease and also the control's current dietary habits.

Descriptive results were expressed as mean and number (percent) and the correlation between each factor and SCC was expressed in the form of odds ratio and 95% confidence interval.

P value of ≤ 0.05 was considered significant and the data were analyzed by the SPSS 9.01 software system.

In brief, the mean ages in the case and control groups were 62 years (± 10.7) and 63.3 years (± 10.2), respectively. Men constituted 46.5% of the cases and controls. The case group showed significant differences in family history of EC (first and second degree relatives), smoking, water pipe smoking, consumption of opium (ingestion or inhalation), chewing Nass (a mixture of tobacco, lime, ash, and other ingredients) and rapid drinking of hot tea.

There were no significant differences between the case and control groups in respect to history of GERD, cancers other than EC, ethnic origin and income. Eating vegetables, fresh fruits and potatoes were found to be protective factors. Our results are not in total agreement with those of Alaeddini and his coworkers, and therefore further studies are needed to clarify the issues. We and others are aware that recall bias might have distorted some of the results.

References

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 - 3 Bolt WJ, Devesa SS, Kneller RW, et al. Rising incidence of adenocarcinoma of the esophagus and gastric cardia. *JAMA.* 1991; **265**: 1287 – 9.
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Dear Editor

In response to the letter from Dr. Hassan Saadatnia et al and concerning the results of the study conducted on the risk factors of esophageal cancer, some points should be taken into consideration:

1. Case-control studies on chronic diseases and their risk factors especially when the objective is determining the association between dietary habits and disease are extremely prone to bias and being confounded. Therefore several studies on the risk factors of esophageal cancer have led to different results.

2. The following are some of the common areas in designing the case control studies, which can cause bias and confounded results:
 - a) Selection of appropriate controls;
 - b) Selection of the cases (existing/prevalence or new/incidence cases);
 - c) Questions about previous dietary habits;
 - d) Determining the pathology of cancer; and
 - e) Recall bias.

On the other hand one statistical point that merits attention is the negligible effect of the risk factors most of which having odds ratios less than 3 or even less than 2. Every small bias and confounding factor in the design alters the results of the study and produces different results regarding the statistical significance.

Considering all aforementioned points, it should be advised that further studies especially prospective ones be designed and conducted in order to avoid the problems inherent in case control studies.

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