Lung Cancer – a Common and Deadly Disease

E.W. Russi

Department of Internal Medicine, Pulmonary Division, University Hospital, Zürich, Switzerland

In Europe, lung cancer is the most frequent lethal neoplasm among men, and its incidence is rapidly rising in women. Sadly enough, early diagnosis and treatment still have a low impact on the survival of patients with this type of cancer.

Risk estimates for lung cancer vary largely from one country to another. This can be attributed to several sources of variation: factors inherent in data collection, smoking habits in the different study populations and distribution of confounders and effect modifiers.

It is well known that cigarette smoking is the major risk factor for lung cancer. In 10 case-control studies carried out in 6 European countries, which included 7,609 cases of lung cancer and 10,431 controls, odds ratios of 29.9 were found in men and 8.7 in women with attributable risks exceeding 90% for men and 60% for women [1].

With an annual age-standardized incidence rate of 61.6 per 100,000, Turkey has the highest lung cancer incidence rate for men worldwide [2]. The incidence is much lower in females (5.1 per 100,000), and is also considerably lower than in the USA and the UK [3]. This reflects the smoking habits of the Turkish population, where, as reported by Gaskell [4] in this issue of *Respiration*, the percentage of female smokers is less than half that of male smokers. A particular aspect of this study is the high proportion of patients with squamous cell carcinoma (40%). This situation is comparable to that in other countries a few decades ago. In the meantime, the proportion of ade-

nocarcinomas among lung cancers has been increasing. Improved pathologic typing has resulted in a decrease in the number of cancers classified as undifferentiated and the appropriate use of WHO definitions has resulted in many tumors formerly classified as large cell tumours being reclassified as adenocarcinoma. However, the reported increase in the proportion of adenocarcinomas cannot be explained by these factors alone. The increase in the proportion of adenocarcinomas is paralleled by a decrease in the proportion of squamous cell carcinomas and, to a lesser extent small cell cancers [5–7]. The reason for this shift is not entirely clear. It is most likely attributable to the changes in smoking habits. Smoke of unfiltered cigarettes contains large particles, which are deposited in the more central airways, whereas smoke of low-yield filter-tipped cigarettes, which is inhaled more deeply and contains smaller potentially carcinogenic particles, is associated with more peripherally located cancers, i.e. adenocarcinomas. It can be assumed, that within the following years smoking habits will change also in Turkey, which will result in a shift with an increasing proportion of adenocarcinomas and a decrease in squamous cell carcinomas.

If it is not possible to stop the smoking pandemic, it is foreseeable that the rate of lung cancer will continue to grow particularly among women. This is sad since the 5-year survival has not substantially increased over the last two decades and early detection is of yet unproven impact on overall lung cancer mortality.

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Erich W. Russi, MD
Pulmonary Division
Department of Internal Medicine, University Hospital
CH–8091 Zürich (Switzerland)
Tel. +41 1 255 38 28, Fax +41 1 255 44 51, E-Mail erich.russi@dim.usz.ch

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