sputum were stained with hematoxylin-eosin and with a monoclonal antibody against eosinophil cationic protein (anti-EG2; Pharmacia; Uppsala, Sweden) for immunohistochemical evaluation. Stained mucosal cells were counted according to the method of Mogbel et al.,3 and such cells in the sputum were also counted and expressed as a percentage of 500 cells.

As shown in Table 1, IPD caused a significant improvement in the PC<sub>20</sub>-histamine value, a significant reduction in the percentage of eosinophils in induced sputum, and a significant reduction in the number of eosinophils and EG2-positive cells in the bronchial mucosal tissues. Hematoxylin-eosin-stained bronchial mucosal tissues showed a clear reduction in mucosal eosinophil infiltration after IPD administration.

An ongoing airway mucosal inflammatory process has been demonstrated in patients with mild or asymptomatic asthma, characterized by eosinophilic and lymphocytic infiltrates, secondary epithelial injury, and subepithelial fibrosis. The considerable eosinophil infiltration in the airway of patients with mild asthma observed in the recent study suggests the necessity of inhibiting eosinophil infiltration even in patients with mild asthma.

In summary, asthmatic patients treated with IPD showed parallel changes in inhibition of eosinophil infiltration and improvement in bronchial hyperresponsiveness, suggesting that IPD may be as useful to treat mild bronchial asthma as inhaler corticosteroids.

Table 1—Effects of IPD Therapy

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. Before IPD*</th>
<th>After IPD*</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC&lt;sub&gt;20&lt;/sub&gt;-histamine, µg/mL</td>
<td>10</td>
<td>527</td>
<td>919</td>
</tr>
<tr>
<td>Sputum eosinophils, %</td>
<td>11</td>
<td>11.6 ± 2.1</td>
<td>6.0 ± 1.6</td>
</tr>
<tr>
<td>Bronchial eosinophils, cells/mm³</td>
<td>8</td>
<td>390.3 ± 98.8</td>
<td>90.0 ± 15.4</td>
</tr>
<tr>
<td>Biopsy EG2, cells/mm³</td>
<td>8</td>
<td>303.5 ± 83.3</td>
<td>62.0 ± 11.2</td>
</tr>
</tbody>
</table>

*Values ± SE.

Cigarette Smoking Habits Among Primary School Children in Turkey

To the Editor:

We read with great interest the article by Meijer and colleagues (October 1996). Turkey is a developing country with an estimated population of 62,526,000 in 1995, of which 40,664,276 were >15 years of age. This population, which is predominantly young and has a high fertility rate, is expected to reach 67 million by the year 2000. Smoking prevalence among the adult population (>15 years of age) is higher than the average prevalence of both the developing and the developed countries, with figures in the general population of 62.8% in men and 24.8% in women. According to the World Health Organization, Turkey ranks sixth in the world in cigarette consumption and, despite these high figures, per capita consumption of manufactured cigarettes shows an average annual increase of 1% between 1990 and 1995 (from 77,314 metric tons to 93,000 metric tons). This trend can be attributed to the invalidation of Turkish National Monopoly in 1986 and to the liberalization of tobacco manufacturing and trading in 1991. Also, the introduction of two large multinational companies, Philip Morris and Reynolds Tobacco International, into the Turkish tobacco market increased the market share five times between the years 1984 and 1994. These changes in tobacco policy and the volume of advertising by transnational companies (which accounted for 14.5 million US dollars in 1996) led to consumers preferring foreign tobacco brands in Turkey. Until November 1996, there had been no legislation to intervene in the overwhelming smoking epidemic in Turkey. To expose the threats of all these factors toward cigarette smoking in the youth of Turkey, we studied primary school children in 1996 prior to institution of the law, “The Prevention of the Harms of Tobacco Products Law (No. 4207).”

In this cross-sectional study, a self-completed questionnaire was given to all students in grades 2 through 5 (ages 7 to 13 years) in three selected primary schools, each representing one of the three socioeconomic classes (high, middle, and low income) as reflected by the districts in Ankara. The questionnaire included multiple choice questions related to the student’s age, gender, smoking status, purchasing of cigarettes in the last week, and knowledge and attitude toward the smoking habits of parents, teachers, and the public. The child’s smoking status was determined by one of four possible answers, as in a previous study:2 (1) never smoked; (2) tried smoking once or a few times; (3) smoked sometimes, less than one cigarette a week; (4) smokes more than one cigarette a week. Smoking status was defined as never smoker (answer 1) and ever smoker (answer 2, 3, or 4). The students also were requested to write either “yes” or “no” in the blank beside each disease in a list (lung cancer, cough and sputum expectoration, heart attack, vessel diseases, stomach ulcer, and stroke) to determine their beliefs in a causal relationship between tobacco use and these diseases.

Of the 1093 students, 1031 (94.4%) answered the questionnaire (55% male). The prevalence of ever smokers was 11.7% (14% among boys and 9% among girls) (χ²=5.76, p<.05). The highest ever smoker rate was obtained in children aged ≤8 years (19.6%, χ²=14.5, p<.002). The prevalence of ever smokers was not significantly different between schools by districts (χ²=2.69, p>.05). Either one or both parents of 710 of 1080 children (65.7%) were smokers. The prevalence of ever smokers was significantly higher among children whose parents smoke than those with nonsmoking parents (4.8% vs 15.3%, χ²=24.67, p<.001). Among the subjects, 23.6% reported purchasing cigarettes within the last week. Most children (81.2%) stated that smoking should be prohibited in public places, without a significant difference based on their smoking habits.

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CHEST / 112 / 3 / SEPTEMBER, 1997 863
habits. Of the 118 ever smokers, 89 (75.4%) were against their parents’ smoking. Most children (68.6%) stated that they had not been taught about the adverse health effects of smoking by their teachers. Lung cancer was most commonly identified as a smoking-related disease (43% of the students); the least identified disease was stroke, with a rate of 4.5%.

Our figures show a high ever-smoking prevalence among children aged 8 to 11 years in one city in Turkey. We agree with Meijer and colleagues that smoking prevention programs should be started in the first grades of elementary school. The antismoking race has begun in Turkey, and there is much to do, for which further studies shall be needed.

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