Parental Smoking and Increased Severity of Asthma in Children

Pages with reference to book, From 28 To 29

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Passive parental smoking may have adverse effect on the children's health as they are constantly subjected to smoke from birth to school age and thereafter spend a considerable time in a smoky environment. It has also been suggested that infections transmitted to children by the coughs of smoking parents may also be a cause for increased respiratoiy illness[1,2]. Children exposed to environmental tobacco smoke may have a higher than average risk of asthma[3-5]. Impairment of lung function dunng early childhood may predispose to respiratoty diseases such as bronchitis later in life[1,6,7].

Effects of parental smoking in both young and older children include increased incidence of pneumonia and bronchitis[8-10], coughs[11], wheeze[3], asthma[12], general respiratory tract diseases' and impaired lung function[13-15]. In young children, the smoking habit of mother is more important because of her greater contact with the child in infancy. In children with asthma maternal smoking habit has a greater effect on lung function than paternal smoking[3,16-18]. However, the results are conflicting and other studies have not shown such relations[19].

A positive correlation between parental smoking and frequent coughs in children has been reported ma survey from England[20]. The percentage of children with reported coughs increased when both parents smoked. The effect was greatest in the youngest age group and was slightly higher in the girls than in the boys[20].

The airways of children with asthma are said to be hyper-responsive[21]. Environmental factors can increase airway responsiveness and produce inflammation[17,22]. For children, important stimuli include respiratoiy pathogens (especially viral agents), allergens and air pollutants, including cigarette smoke. Subsequent exposure to allergen and non-allergic stimuli may lead more easily to airway obstruction. Stimuli that normally do not produce symptoms (exercise or smoke) can produce noticeable problems, with increasing responsiveness[23]. It has been suggested that infants considered to be predisposed to asthma on the basis of family history or parental smoking are more responsive to inhaled histamine than normal infants[24].

Exposure to environmental tobacco smoke adversely affects the health of children with asthma[3,4,17,18,25-27]. A decrease in pulmonary function[17] and an increase in airway reactivity[26] has been reported onexposureto tobacco smoke in asthmatic children. These children visit hospitals more frequently for treatment of acute exacerbations of asthma when they are constantly exposed to tobacco smoke at home[27].

Snoring which is quite common in children is also closely related to parental smoking[28]. It is associated with the presence of rhinitis or cough and sputum production. A weak association between snoring and asthma was noted, but the risk of habitual snoring was not significantly increased in asthmatic children. The dose effect-relation of smoking and snoring puts forward a further adverse effect of passive parental smoking on their children's health.

Most of the studies that have shown the effects of parental smoking on children's health have relied on parental reports of their smoking habit, self-reported by the children or documented through blinded review of medical records[17,19,23,27]. An association between exposure to environmental tobacco smoke and pulmonary morbidity in children with asthma has also been reported by the measurement of urine cotinine levels[25,29]. It also indicates that parental reports are reliable whenused to screen for exposure

to environmental tobacco smoke in children with asthma. Urine cotinine levels can provide additional information when exposure to tobacco smoke is reported, both in assessing the degree of actual intake and in monitoring efforts to reduce exposure[25].

It is evident that parental smoking has a great role in causing adverse pulmonary effects in children with asthma. The long term harm from passive smoking should be adequately investigated and efforts should be made to reduce inhalation of environmental tobacco smoke for children with asthma.

In Pakistan, smoking is very common in male population; even very young children smoke but the percentage of women smokers is less as compared to other countries. However, a considerable number of women with smoking habit are found mostly in upper, lower middle and poor classes, especially in rural population. Smoking of other family members is also important in increasing the smoky atmosphere in homes. Studies should therefore, be conducted to assess the adverse effects of exposure to environmental tobacco smoke in children with asthma in our population. Furthermore, as other studies suggested, it is advisable that parents should not smoke at home oratleast in the presence of their children.

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