Effectiveness of smoking cessation advice for asbestos workers

Andrew Johnson, Peter Farrow and Roland Jenkins

Aim
To assess effectiveness of smoking cessation advice to asbestos workers at statutory medical examinations.

Methods
Workers are required to be examined every 2 years while continuing potential exposure to asbestos, including cessation advice if smokers. Records of 170 workers seen between 1986 and 2004 in Kent and Canterbury Hospital were reviewed. Respiratory symptoms, signs, lung function, radiological findings and smoking status were analysed.

Results
At initial visit 109 (64%) were smokers. Thirty-four of these attended twice. Despite verbal advice, including emphasis on respiratory abnormalities detected in 62%, only three (9%) had ceased smoking by self-reporting at the second visit.

Conclusion
Despite appropriate counselling regarding the potential risks of asbestos exposure and smoking, the cessation rate among asbestos workers was disappointingly low. Further measures to encourage asbestos workers to enter smoking cessation programmes should be considered.

Introduction
In the United Kingdom under the Asbestos Regulations [1], asbestos workers must undergo assessment by a Health & Safety Executive appointed doctor every 2 years. Suggested components of the assessment include a respiratory symptoms questionnaire, clinical examination and spirometry. Chest radiography was required until 2003 but is now at the discretion of the appointed doctor. The appointed doctor completes a standardized medical assessment form which also asks by means of a checkbox for confirmation that the asbestos worker has been given advice about smoking cessation. This is in view of the increased risk of lung cancer in smokers exposed to asbestos fibres [1,2].

Our impression from carrying out consecutive asbestos medicals on the same workers is that simple cessation advice is ineffective. We therefore carried out an audit of consecutive medicals to assess the proportion of asbestos workers who ceased smoking.

Methods
The records of all asbestos medicals performed under the Asbestos Regulations at the Kent and Canterbury Chest Clinic, Ethelbert Road, Canterbury, Kent CT1 3NG, UK. Correspondence to: Andrew Johnson, Kent and Canterbury Hospital–Chest Clinic, Ethelbert Road, Canterbury, Kent CT1 3NG, UK. Tel: +44 1227 768877; fax: +44 1227 864102; e-mail: andrew.johnson@ekht.nhs.uk

Hospital between 1986 and 2004 were identified. All medicals within this time frame were performed by a single appointed doctor (AJJ), a specialist respiratory physician who undertakes all asbestos medical examinations within East Kent. From these records, workers who attended consecutive two yearly medicals at least once were identified. The following data were collated for analysis: age, sex, occupation, worker-reported smoking status, respiratory symptoms (cough, sputum, haemoptysis, dyspnoea or chest pain), clinical findings, spirometry (forced expiratory volume in 1 s (FEV1), forced vital capacity (FVC) and FEV1/FVC ratio) and chest radiology. Abnormalities were recorded as any chest symptoms or signs, FEV1 or FVC < 80% predicted or FEV1/FVC ratio < 75%, or any radiological pulmonary or pleural changes. It was the standard practice of AJJ to give all smokers clear verbal advice concerning the importance of quitting, including the greatly increased risk of lung cancer in smokers with asbestos inhalation.

Results
Records of 170 asbestos workers were available for analysis. All were male with an average age of 37 years (range 16–61). At their first visit 109 (64%) were current smokers (Table 1). One hundred and twenty-two workers did not attend for a second medical examination, leaving 48 for further analysis. Thirty-four (71%) of these were smokers initially, but only three (9%) reported cessation...
at the second visit. Of the 34 initial smokers followed up, 21 (62%) had some abnormalities (Table 2).

### Discussion

This study found that a very high proportion of asbestos workers smoke (64%) and may be at greatly increased risk of malignancy as a result. Only a small proportion attended for a further medical and only 9% of these had stopped smoking in the meantime despite clear verbal advice regarding their increased risk of malignancy. The study also found a high proportion of symptoms or abnormalities on examination and investigation in smokers.

The low second attendance rate may be due to workers leaving the industry or moving elsewhere or other factors. The weaknesses of this study are its small numbers and lack of control group. Comparison with other cessation studies is hindered by lack of age and sex comparability. However, Campbell et al. [3] found an 8.7% cessation rate at 1 year in their unselected control group given simple advice. The 9% rate observed in our series is similar. Validation of non-smoking claims was not made, so our data may overestimate the true rate.

The poor response to simple cessation advice is disappointing, and leads to concern whether these workers follow any health and safety recommendations. Nevertheless, further measures may be helpful. Nicotine replacement therapy [4] and bupropion [5] have shown efficacy in increasing cessation rates. Non-pharmacological techniques have been advocated, although success rates are small [6]. However, smoking cessation interventions can be obtained at low cost per life-year gained [7]. Appointed doctors already should report any abnormalities to the general practitioner with workers’ consent. We recommend that workers indicating any willingness to quit smoking should be referred to a comprehensive cessation programme either via their general practitioners, or directly by the appointed doctor in their working area.

### Conflicts of interest

None declared.

### References