A cross-sectional study comparing the motivation for smoking cessation in apparently healthy patients who smoke to those who smoke and have ischaemic heart disease, hypertension or diabetes

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Background. Smoking remains the largest preventable cause of morbidity and mortality in the UK.

Objectives. We aim to compare the motivation to stop smoking of patients with either ischaemic heart disease, hypertension or diabetes (diseased smokers) with apparently healthy smokers (controls), and comment on smoking cessation rates at 18 months following nurse-led active intervention in those who are motivated to stop smoking.

Methods. Questionnaires were sent out to 220 patients in each group. Those patients who had expressed a desire to stop smoking were invited to attend one to one or within a group.

Results. In total, 328 questionnaires were returned. Significantly more patients in the diseased group were ex-smokers, 29% versus 18% (P = 0.04), expressed a desire to stop smoking, 45% versus 30% (P = 0.02), and stated that they would like to receive individual support, 38% versus 23% (P = 0.05). Thirty-four patients attended for professional help to stop smoking. At 18 months follow-up, four patients remained not smoking.

Conclusions. The findings in this study suggest that individuals who smoke and have either ischaemic heart disease, hypertension or diabetes may be more motivated to give up smoking and were more receptive to individual support. However smoking cessation rates at 18 months were disappointing.

Keywords. Diabetes, hypertension, ischaemic heart disease, nurse-led intervention, smoking cessation.

Introduction

Approximately 15 000 000 people smoke in the UK. Smoking accounts for 17% of all deaths in England.1 Attempts at smoking cessation with brief advice can achieve success rates of approximately 5%.1–3 Attempts at smoking cessation before the onset of disease have shown very low rates of success2 and after the onset of disease have shown variable success rates of up to 71%.4 Mortality among the latter group may be substantially reduced on stopping smoking.

The aims of this study are to investigate whether patients with either ischaemic heart disease, hypertension or diabetes are more motivated to give up smoking, more amenable to receive help to stop smoking and knowledgeable of the consequences of smoking when compared with apparently healthy smokers. Finally, we report on smoking cessation rates at 18 months following nurse-led active intervention in smokers who are motivated to give up smoking.

Method

Setting
The study was set in a semi-rural training practice in Northumberland with a list size of 11 000 patients and six full-time partners.
Subjects
Patients between the ages of 15 and 74 years who smoked and had one or more of the diseases diabetes, hypertension or ischaemic heart disease were drawn from the practice computer. A total of 220 patients were recruited and a control group of 220 patients matched for age and sex was derived from a random sample of one in every 10 smokers.

Design
A cross-sectional design was chosen, comparing beliefs and motivation to stop smoking in the two groups.

A two-page questionnaire was sent to 440 patients. Responders who expressed a willingness to join a support group were given a date to attend. Those responders who expressed a desire to receive individual help were offered an appointment time of half an hour. All patients were followed up at weekly intervals, monitored with a carbon monoxide monitor, given reading material and offered support and advice.

Outcome measures
Main outcome measures were whether patients wished to stop smoking, receive individual help or receive group help to stop smoking. Smoking cessation rates were recorded at 18 months.

Statistics
The data was analysed using Epi-Info. Descriptive statistics and comparisons of dichotomous variables using the chi-square test with Yates correction were examined.

Results
Of the 440 questionnaires, responses for analysis were received for 166 patients in the disease group and 147 in the control group.

The mean age of the disease population was 60 years (standard deviation (SD) 8.8 years). The mean number of cigarettes smoked per day by the disease and control populations was 16.7 (SD 9.7) and 18.3 (SD 9.0), respectively. The mean number of years smoked by the disease and control populations was 38.3 years (SD 12.0 years) and 38.9 years (SD 11.9 years), respectively.

Significantly more patients in the disease population compared with the control population reported that they were ex-smokers (48/166 versus 27/147, respectively; chi-square = 4.2, \( P = 0.04 \), 95% CI for difference in proportions 0.01–0.20). When asked about their beliefs as to whether smoking can cause disease, 93% of patients in the disease group and 90% in the control group (155/166 versus 133/147, respectively, chi-square = 0.5, \( P = 0.5 \), 95% CI for difference in proportions −0.03–0.09) responded saying that smoking can cause one or more of shortness of breath, cough, bronchitis, heart disease or cancer (Fig. 1).

Discussion
Significantly more smokers in the disease group expressed a desire to stop smoking and to receive individual help.
The majority of responders in both groups had made a previous attempt to stop smoking and believe that smoking contributes to the development of disease. Very few had received professional help to stop smoking.

Death rates from sustained smoking over four decades are approximately two- to three-fold that of lifelong non-smokers; however, those who stop smoking before middle age are almost at no greater risk of smoking-related disease and death than lifelong non-smokers. Smoking cessation rates for primary prevention of disease (before the onset of disease) with brief advice is between 2 and 15%. Smoking cessation rates for secondary prevention of disease (after the onset of disease) with brief advice has been shown to be 21–45%. The development of coronary artery disease has been shown to be predictive of smoking cessation. Nurse-led health checks have shown a disappointing lack of effectiveness for smoking cessation sustained at 3 years. A disappointing low 5% cessation does however equate to over half a million quitters per year in the UK.

The findings of this study suggest that smokers who have either ischaemic heart disease, hypertension or diabetes are more motivated to stop smoking than smokers without these diseases. They are a high risk group of patients and a relatively easy group to target. Both brief advice in a primary care consultation and nurse-led active intervention in this group of patients may yield significant rates of smoking cessation.

Disappointingly, only 4 patients successfully stopped smoking at 18 months (2 from each group). We would question whether this is a direct result of our actions or merely an expected rate of attrition.

Given limited resources in primary care, efforts may be best used to target high-risk groups and those who express a genuine desire to stop smoking.

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References