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Recent changes in lung cancer incidence for south Asians: a population based register study

Lucy K Smith, Michael D Peake, Johannes I Botha

In Britain the incidence of lung cancer among south Asians (Indian, Pakistani, and Bangladeshi) is much lower than in the rest of the population. In the UK south Asian population, however, it is the commonest cancer for men and the second commonest for women. Little has been reported on lung cancer trends among south Asians in Britain. We explored trends in lung cancer incidence from 1990 to 1999 in Leicester (22% of residents classified as south Asian in 1991 census).

Participants, methods, and results

We identified cases of lung cancer diagnosed in Leicester residents between 1 January 1990 and 31 December 1999 from the Trent Cancer Registry. Ethnicity data were not available for all patients, so we used software assessing forename and surname to classify patients as south Asian or non-south Asian, with visual inspection of the data to increase accuracy. We assessed deprivation using the Townsend index. The local research ethics committee approved the study.

Population estimates at the level of electoral wards from the 1991 census (categorised by sex, ethnicity, and 5-year age bands) were aggregated by deprivation tertile to calculate lung cancer incidence. We investigated variation in incidence by ethnicity, deprivation, age, and year of diagnosis and any interactions between them using Poisson regression separately for men and women. We calculated the interaction between period of diagnosis (1990-4 or 1995-9) and ethnicity to compare trends over time.

Of the 1902 patients with lung cancer identified, 76 were classified as south Asian (4%). South Asians were slightly younger than non-south Asians (median age 70.3 v 72.1 years). After adjusting for differences in age and deprivation, we found lung cancer rates were lower for south Asians than non-south Asians (incidence ratio for men 0.41 (95% confidence interval 0.31 to 0.54), for women 0.52 (0.20 to 0.90)).

The adjusted incidence increased over time for south Asian men but decreased for non-south Asian men (P=0.038), with an increase in risk of 43% for south Asian men (incidence ratio for 1990-4 v 1995-9 1.43 (0.84 to 2.44)) and a decrease of 10% for non-south Asian men (0.81 (0.72 to 0.91)). For non-south Asian men, the decrease in incidence occurred in those from more deprived areas, where lung cancer incidence was higher (see figure). There was no evidence of a trend with deprivation over time for south Asian men.

Patterns for women were different, with slight increases in lung cancer incidence over time for both south Asians and non-south Asians and no evidence of differing patterns over time (P=0.489). South Asian women had a 50% increase in risk (1.50 (0.61 to 3.67)), while the increase in risk for non-south Asians was 9% (1.09 (0.93 to 1.28)). The changes in incidence over time were similar for all levels of deprivation (see figure).
Incidence ratios (95% confidence intervals) of lung cancer comparing incidence for 1995-9 with that for 1990-4 among south Asian and non-south Asian men and women by deprivation tertile (1=least deprived, 3=most deprived). Values (log scale) from Poisson regression models including interactions between time period and deprivation tertile and between time period and ethnicity

Comment

Our findings confirm lower rates of lung cancer for south Asian men than non-south Asian men but suggest differing trends, with incidence increasing among south Asian men but falling among non-south Asians. There is a tendency to emphasise the importance of cancers such as those of the head and neck among south Asians because they are relatively more common than in the majority UK population. However, Bhopal and Rankin also highlight the need to look at absolute numbers of cancer cases, which show that lung cancer is the commonest cancer for both south Asian and non-south Asian men. With smoking rates higher among UK south Asians aged 30-49 years than those aged 50-74, lung cancer prevention is a high priority. Health promotion programmes should target the whole population, and the tendency to dismiss south Asians as “low risk” populations for smoking related disease needs to be revised.

We thank Louise Hollingworth for her help in providing data from the Trent Cancer Registry. Material from Crown Copyright records was made available through the Post Office and the ESRC data archive. We thank Hilda Parker for her comments on the manuscript, and we appreciate the advice of Albert Benghiat, lead clinician for Leicestershire Cancer Services Network.

Contributors: LKS and JLB contributed to the conception and design of the study and secured its funding. LKS analysed the data, and all three authors interpreted the results and wrote the paper. LKS is the guarantor for the study.

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RESEARCH POINTERS

Platelet responsiveness to aspirin in patients with hyperlipidaemia

Maribeth Friend, Ivana Vucenik, Michael Miller

Aspirin 325 mg/day reduces the rate of events associated with coronary heart disease. In most people, aspirin produces irreversible inhibition of platelet aggregation, but in a sizeable minority of patients, the degree of platelet aggregation needed to prevent events according to in vitro assessments is not achieved. Risk factors for coronary heart disease may contribute to aspirin resistance (the inability of aspirin to protect individuals from thrombotic complications), so aspirin may not be cardioprotective in patients with hyperlipidaemia. We evaluated patients with a range of cholesterol concentrations to determine the impact of hypercholesterolaemia on platelet responsiveness in patients treated with aspirin.

Participants, methods, and results

Consecutive patients (n=56) were recruited from the University of Maryland Preventive Cardiology Outpatient Center. The mean (SD) age was 54.3 (11.1)