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Mortality from coronary heart disease in Asian communities in London

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In England and Wales in 1970-2 mortality from coronary heart disease was 20% higher in men and women who had been born in south Asia than in the general population.[1] Asian communities in Britain differ in religious, cultural, geographic, and genetic backgrounds; this diversity is similar to the differences among European populations with differing rates of coronary heart disease. In seeking causes of the high mortality from coronary heart disease in Asians rates for different groups must be established. Analysis of surnames on death certificates suggests that high rates are shared by Gujaratis, Punjabis, southerners, and Moslems, but this method has limitations.[2]

We examined the pattern of mortality in different ethnic groups originating from south Asia by using districts of residence to distinguish communities in which one group predominated; five London boroughs were chosen on this basis. In 1982 a survey in Brent and Harrow showed that 77% of Asians aged over 25 spoke Gujarati.[3] In a 1985 survey of schoolchildren in Ealing Punjabi speakers accounted for 68% of those who spoke an Asian language at home; many of the 17% who spoke Hindi or Urdu also originated from the region that corresponded to Punjab before partition.[4] Data from the 1981 census show that in Tower Hamlets 80% of the population born in south Asia and aged 20 and over were born in Bangladesh, and in Waltham Forest 56% were born in Pakistan. Mortality among Asians in these boroughs was therefore used as an indicator of mortality in Gujaratis, Punjabis, Bangladeshis, and to some extent Pakistanis.

Methods and results

Tables of deaths by underlying cause (International Classification of Disease 410-414 versus all other) and population figures from the 1981 census were obtained from the Office of Population Censuses and Surveys. Residents born in India, Pakistan, Bangladesh, and Sri Lanka were grouped as Asian; for Brent and Harrow residents born in east Africa were also included in this category. Standardised mortality ratios were calculated for Asians in each borough using the rates for that borough as the standard and also, to facilitate direct comparison, using the rates for England and Wales in 1981 (table). Standardised proportional mortality ratios compare the observed and expected frequencies with which coronary heart disease is given as the underlying cause on death certificates; they do not depend on census data, and they measure the extent to which excess mortality is specific to a particular disease. Ratios for Asian women in Tower Hamlets and Waltham Forest were based on only a few deaths.

Comment

National data for mortality by country of birth in 1979-83 are not yet available but, unless the Asian populations that we studied are unrepresentative, mortality from coronary heart disease among Asians in England and Wales has increased by about 25% since 1970-2. The diminished effects of selection for fitness at migration may account for some of this increase. The economic state of Asian populations in London varies from the comparative affluence of Gujaratis in Brent and Harrow to the deprivation experienced by Bangladeshis in Tower Hamlets. Smoking rates range from very low in Gujarati women in Brent and Harrow[3] to high in Bangladeshi men in Tower Hamlets.[5] Most Asians in Brent and Harrow are vegetarian[3] whereas the Moslem communities of Tower Hamlets and Waltham Forest are generally not. It is therefore striking that Asian men and women in each borough share a mortality from coronary heart disease 50% higher than the national average. Any general explanation of the high rates of coronary heart disease in south Asians overseas must invoke some factor that is common to the diverse communities that make up the Asian population in Britain.

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Mortality from coronary heart disease among Asians aged 20-64 in different London boroughs during 1979-83

London borough (predominant Asian ethnic group)	No of deaths	Standardised to average (100%) for each borough: Standardised mortality ratio	95% Confidence interval	Proportional mortality ratio	Standardised to average (100%) for England and Wales: Standardised mortality ratio	95% Confidence interval
			Men			
Brent and Harrow (Gujarati)	177	163	138 to 187	146	160	136 to 183
Ealing (Punjabi)	118	136	111 to 161	122	147	120 to 173
Tower Hamlets (Bangladeshi)	49	118	85 to 151	132	141	102 to 180
Waltham Forest (Pakistani)	36	180	121 to 239	121	156	105 to 207
			Women			
Brent and Harrow (Gujarati)	33	157	103 to 211	145	160	105 to 215
Ealing (Punjabi)	30	173	111 to 235	158	206	132 to 280
Tower Hamlets (Bangladeshi)	2	106*		136*	108*	
Waltham Forest (Pakistani)	7	318*		268*	217*	

*Ratio calculated from small numbers.