Epidemiology of subarachnoid hemorrhage in Finland from 1983 to 1985.

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Abstract: The age-standardized incidence of subarachnoid hemorrhage was 33/100,000/yr among Finnish men and 25/100,000/yr among Finnish women. Subarachnoid hemorrhage represented 11% of all strokes detected during 1983-1985 in the community-based stroke register in three areas of Finland. Age-standardized mortality from subarachnoid hemorrhage was 18/100,000/yr among men and 12/100,000/yr among women aged 25-74 years, representing in men 22% and in women 23% of all deaths from stroke in the register. The case-fatality rate of subarachnoid hemorrhage was high: 35% among men and 33% among women within 2 days after the onset of the stroke attack and 48% in men and 46% in women at 1 month. Our findings suggest that the incidence and mortality of subarachnoid hemorrhage in Finland are among the highest worldwide, although differences in criteria, study methods, and classification procedures reduce the comparability of studies from different countries. The occurrence of subarachnoid hemorrhage in our present study is also higher than that previously reported in this country. We believe that this is more likely due to changes in diagnostic classification and improvements in detection of the disease than to a real increase in the morbidity and mortality of subarachnoid hemorrhage.

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The incidence of aneurysmal subarachnoid hemorrhage (aSAH) ranges from 4 to 10 per 100,000 person-years in most countries, and 30-day case fatality is high. The aim of this study was to estimate the incidence and case fatality of aSAH and to assess preictal predictors of survival in 2 large Norwegian population-based cohort studies.

A total of 94,976 adults (=20 years) in the Nord-Trøndelag Health Study and 31,753 participants (aged =20 years) in the Tromsø Study were included. During follow-up, aSAHs were identified, incidence rates were estimated, and predictors of survival were assessed using Cox and Poisson regression analysis.

A total of 214 patients with aSAH were identified during 2,077,927 person-years of follow-up from 1984 to 2007. The incidence rate was 10.3 per 100,000 person-years: 13.3 for women and 7.1 for men. The incidence increased by 2% (95% confidence interval [CI] 0-4) per 5-year time period. Case fatality at 3, 7, and 30 days was 20%, 24%, and 36%. Thirty-day case fatality remained stable during follow-up (odds ratio 1.01, 95% CI 0.97-1.06 per year). Never smokers had poorer survival after aSAH than current and former smokers combined (hazard ratio 1.6, 95% CI 0.9-2.9).

The slight increase in incidence of aSAH over time may be explained by differences in diagnostic procedures. Case fatality remained stable during 23 years of follow-up.