Mobile and cordless telephones and the association with brain tumours in different age groups

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We included in a case-control study on brain tumours and mobile and cordless telephones 1 617 patients aged 20-80 years of both sexes diagnosed during January 1, 1997 – June 30, 2000. They were alive at the study time and had histopathology verified brain tumour. One matched control was selected from the Swedish Population Register to each case. Exposure was assessed by a questionnaire that was answered by 1 429 (88%) cases and 1 470 (91%) controls. In total use of analogue cellular telephones gave an increased risk with odds ratio (OR)=1.3, 95% confidence interval (CI)=1.04-1.6, whereas digital and cordless phones did not overall increase the risk significantly. Ipsilateral use (same side as tumour localisation) yielded for analogue phones OR=1.7, 95% CI=1.2-2.3, digital phones OR=1.3, 95% CI=1.02-1.8 and cordless phones OR=1.2, 95% CI=0.9-1.6. The analysis for different age groups showed the highest risk in the age group 20-29 years with OR=5.91, 95% CI=0.63-55 for ipsilateral use of analogue phones. With >5-year latency period the highest risks were found in the age group 20-29 years for analogue phones; OR=8.17, 95% CI=0.94-71, and cordless phones; OR=4.30, 95% CI=1.22-15, whereas no consistent pattern was found for digital phones.

Key words: Mobile telephones, digital telephones, cancer risk, age groups