Letters to the Editor

Meningioma and mobile phone use
From SAM MILHAM

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The recent Interphone paper by Lahkola et al. in the International Journal of Epidemiology raises a number of questions that need answering.

In the background part of the abstract, the authors write that this was a study of 1209 meningioma cases and 3299 population-based controls. On page 4, in the Results section, they write that the study finally was of 1204 cases and 2945 controls. The abstract is therefore misleading.

In the Materials and methods section, they state that controls were frequency matched to the cases by sex and 5-year age group. Table 2 shows that 75.1% of the cases were female compared with 53.6% of controls, and that 12.5% of the cases were <40 years old compared with 22.3% of the controls. Was there a problem with matching?

The major finding of the paper is that only 2 of the 60 calculated odds ratios (ORs) in Tables 2–5 were >4.1

The two ORs >1 are both in the >10 years since the first use category. Either cell phone exposure protects against meningioma or the exposure assessment is biased. If cell phone exposure is not associated with meningioma, I would expect the ORs to be randomly distributed in the tables. In fact, there is a striking trend in the ORs. In Table 3, the ORs in each of the latency, exposure and use categories shows that in each of the five categories examined, the highest category has a higher OR than the lowest. This is also true in seven of the eight categories shown in Table 4. In Table 5, this is also true in the three ipsilateral categories, but only in one of the of the three contralateral categories. So 15 of 18 of the latency, exposure and use categories show a positive dose effect. I think these findings suggest a serious selection bias. I also think that the paper shows that cell phone use is associated with meningioma.

Conflict of interest: None declared.

Reference


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Reader’s Response: Meningioma and mobile phone use—a collaborative case–control study in five North European countries
From L LLOYD MORGAN

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There are many problems in this recently published Interphone study by Lahkola et al. Among them are unexplained differences in the number of controls and cases, a gender mismatch among controls, a stated concern for the ‘implausibly high reported mean daily hours of use’, and a large fraction of odds ratios (ORs) <1.

Control and case differences
The authors report, ‘... the slightly smaller numbers of cases [1] than in national reports are due to revised diagnosis, date of diagnosis or history of previous brain tumour’. This would imply that errata should have been sent to the journals that published these three national studies. What is not reported is that