Reviewer's report

Title: A case-control study on the effect of Apolipoprotein E genotype on gastric cancer risk and progression

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Reviewer: Jan O Aasly

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The authors genotyped fifty-six gastric cancer cases and 444 hospital controls for apoE polymorphism (#2, #3, #4 alleles). The relationship between GC and putative risk factors was measured using the adjusted odds ratios (ORs) and their 95% confidence intervals (CIs) from logistic regression analysis.

Subjects carriers at least one apoE #2 allele had a significant 60% decrease of GC risk compared with #3 homozygotes. No significant interaction emerged between the #4 or #2 allele and environmental exposures, nor #2 or #4 alleles affected the median survival times, even after correcting for age, gender and stadium.

They concluded that the #2 allele may have a protective effect of against GC.

The study sample size comprised 156 cases and 444 controls, with a participation rate of 98% among cases and 93% among controls. In table 1 152 GC cases and 402 controls are genotyped which is a much lower percentage than 98% and 93%, why? Was this due to genotyping problems? The number of genotyped cases and those responding to environmental studies should be the same.

How was the controls selected? The control group is in many ways quite similar to the GC group. The data on serum cholesterol levels were not available. However, was there any data on use of statins? There are results suggesting that statins may reduce the risk of gastric cancer and data for statin use could be a surrogate marker for abnormal lipid metabolism.

In table II the authors should change "NC: not calculable due to few many values"

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests