Letters to the Editors

Warfarin, medicinal drugs and road traffic accidents

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Delaney *et al.* [1] have recently reported that warfarin use has not been linked to an increase in road traffic accidents as previously reported [2].

The finding of no increase in the risk of motor vehicle accidents following warfarin use is reasonable, as there is no evidence that this medicinal drug impairs psychomotor performance. Furthermore, in the summary of product characteristics and package insert within the European Union (EU) it is not mentioned that this drug impairs driving performance, as the authors also indicated for Canada [1]. Within the EU, according to the existing rules, information about the effect of medicinal drugs on driving and the use of machinery should be included in the summary of product characteristics and package insert [3, 4]. Furthermore, a classification regarding the effects of drugs on driving performance has been proposed [5]. Spain introduced a three-level categorization system after Belgium, and warfarin was rated as a non-impairing medicinal drug of driving performance.

One aspect of relevance is that, in the sample of the mentioned study [1], both the cases (78%) and controls (76%) were taking 'sedating drugs' quite frequently. Many of these drugs (benzodiazepines, barbiturates, classic antidepressants and antipsychotic drugs) have shown a clear deteriorating effect on psychomotor performance [6] and appropriate warnings appear in the summary of product characteristics and package inserts. They are frequently rated as category III (likely to produce severe effects) or II (likely to produce minor or moderate effects). Nevertheless, the new antidepressants (selective serotonin reuptake inhibitors and antipsychotic drugs) have a less impairing effect on driving performance and are classified as low impairing drugs. What is of relevance is that in clinical practice, when prescribing to a driver (the majority of the population in

Western countries), appropriate drug selection and information regarding driving should be provided. An additional aspect to be considered, as mentioned by the authors [1], as well as in previous studies [5], is the possibility of interaction between the prescribed drugs, as well as with alcohol.

Regarding the study design, the authors noticed [1] that they were not able to control by exposure (distance driven), which is a key issue. The question has also recently been raised that those drivers who drove less distance are more frequently involved in road accidents in any age group [7]. Alcohol consumption is another confusing factor for which results has not been controlled. Alcohol consumption varies according to age, decreasing as age increases but still frequent in older people [8]. This may be of relevance, as many of the subjects in the study were taking 'sedating drugs'.

Within the EU policy of reducing road traffic accidents, the target is a 50% reduction between 2000 and 2010. To achieve this, the action programme is making continuing efforts 'to combat the scourge of drink-driving and find solutions to the issue of the use of drugs and medicines' [9]. The promotion of appropriate prescribing to the driver patient is one of these.

Competing interests: None declared.

References

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Authors' response: Warfarin, medicinal drugs and road traffic accidents

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We thank Dr Alvarez for his comments in response to our paper [1]. We agree that drink-driving is both concerning and important to reduce as a public health goal, and that appropriate prescribing is a key issue in road safety.

The major goal of our study was to assess the validity of a previous finding of a potential hazard for drivers using anticoagulants [2] and provide data for policy makers to make more informed decisions. The extremely high level of use of 'sedating drugs' observed in the members of this cohort is definitely concerning and previous research on the same cohort has explored the public health impact of this use [3].

We agree that distance driven could be important for these studies if it differs widely between users and non-users of warfarin. However, the difference in driving between users and non-users would have to be huge for it to disguise an adverse effect of warfarin use in our study. The lack of risk among the exposed suggests that, insofar as there is any extra risk, the current clinical and regulatory framework in Quebec controls it adequately and that no additional regulation is required.

In terms of alcohol use, we agree that it would have been ideal to record this information. Unfortunately, the nature of our database (based solely on prescription drugs) made this impractical. As alcohol use is not recommended among warfarin users, it is possible that a lower level of 'drink-driving' could explain the protective effects seen in this drug among current users.

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