Drug Safety 2006; 29 (12): 1191
0114-5916/06/0012-1191/$39.95/0

Risk factors for Rhabdomyolysis with Simvastatin and Atorvastatin

We applaud the work of Ronaldson et al.[1] in evaluating the prevalence of risk factors in the setting of rhabdomyolysis. As a minor point, they note that more patients experiencing rhabdomyolysis receiving atorvastatin did not have a risk factor relative to those receiving simvastatin. It is noteworthy, however, that the 40mg dose cut-off employed to signify 'high dose,' which served as a risk factor, yields a different *de facto* potency threshold for the two drugs. Simvastatin 40mg approximates in lipid lowering potency, rather, to atorvastatin 20mg,[2] suggesting that patients who received atorvastatin 20mg might reasonably be labeled 'high-dose' statin users. We suggest that statin potency rather than milligrams may more appropriately be the determ inant of risk, and we note that fewer atorvastatin patients may be missing a risk factor if a dose cut-off point of 20mg for atorvastatin were employed for consistency.

Ronaldson et al.[1] state that "no study has analysed cases of statin-associated rhabdomyolysis for the frequency of established risk factors, as a means to evaluate their importance…" None, indeed, has done the analysis of these authors, but published abstracts have provided information of relevance: the dose of simvastatin was linked to risk of rhabdomyolysis in a veteran sample,[3] supporting a dose relation of statins to muscle adverse effects – not exclusive to rhabdomyolysis – that has been reported elsewhere.[4,5] The prevalence of several risk factors associated with rhabdomyolysis were identified by Kordas et al.[6] These included one factor, hypertriglyceridaemia, which was not assessed in the current study (although it is correlated with diabetes mellitus, which was assessed). Finally, the authors may be interested to note that the dose relation of statins to muscle problems, indexed by creatinine kinase elevations, was stronger for lipophilic statins in an evaluation of adverse effect rates in clinical trials comparing high- and low-dose statins, providing evidence concordant with the authors' observation that simvastatin (the most lipophilic statin) shows a more powerful dose-response relationship than does atorvastatin.[5]

We thank Ronaldson and colleagues for their important analysis.

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Acknowledgements

The authors have no conflicts of interest that are directly relevant to the content of this letter.

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