Reviewer's report

Title: Rhabdomyolysis due to the additive effect of statin therapy and hypothyroidism.

Version: 6 Date: 24 May 2007

Reviewer: Geoff Wong

I am familiar with the literature and believe that this case meets one of the 7 criteria for evaluation in the journal: An unexpected event in the course of observing or treating a patient

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Comments to authors:

General

The authors of this case describe a condition which is well recognised with statins. The Summary of Product Characteristics (SPC) for atorvastatin specifically warns in section 4.4: "As with other statins atorvastatin should be prescribed with caution in patients with pre-disposing factors for rhabdomyolysis. A creatine phosphokinase (CPK) level should be measured before starting treatment in the following situations:

- Hypothyroidism

The emergence of rhabdomyolysis in this case report is therefore credible and I was able to find at least a dozen other case reports which highlight a similar association with the emergence of rhabdomyolysis occurring in patients who were hypothyroid or had developed hypothyroidism whilst concurrently taking a statin.

This case report is a salutary reminder for prescribers of statins to look for pre-disposing factors for rhabdomyolysis prior to issuing a prescription.

Revisions necessary for publication

One minor point work clarifying is whether or not this patient had other additional predisposing factors for rhabdomyolysis, such as:

- Personal or familial history of hereditary muscular disorders
- Previous history of muscular toxicity with a statin or fibrate
- Alcohol consumption levels

The main issue that needs work is refinement of the English in the text so that it reads more fluently. For example, in the abstract:

"We describe a patient with unnoticed hypothyroidism developing rhabdomyolysis due to statin without any additional precipitating factor. Statin was stopped, intravenous fluids were started immediately and L-thyroxine replacement on the day after confirmed the diagnosis of hypothyroidism."
We describe a patient with undiagnosed hypothyroidism who developed rhabdomyolysis whilst taking a statin without any other precipitating factors. The Statin was stopped, intravenous fluids were started immediately and L-thyroxine replacement commenced after thyroid function tests revealed hypothyroidism.

There is also one minor typographical error:

"Urine analysis showed moderate blood with dispict, but on microscopic examination there were no erythrocytes."

Is dispict meant to be dipstick?

**What next?:** Accept after minor revisions

**Quality of written English:** Needs some language corrections before being published