PHARMACOTHERAPY

Statins and T2DM—an IGF link?

Atorvastatin therapy is associated with decreased levels of insulin-like growth factor (IGF)-I, IGF-II and IGF-binding protein 3 (IGFBP-3) in patients with type 2 diabetes mellitus (T2DM) and microalbuminuria, report Narayanan *et al.*

Statin therapy, a widely used approach to lower cardiovascular disease risk, has been linked with an increased risk of T2DM and with worse glycaemic control in patients with the disease. High statin doses seem to amplify this increased risk compared with low doses. Narayanan *et al.* hypothesized that atorvastatin therapy would lead to dose-dependent changes in the levels of IGFs and IGFBPs, as altered concentrations of these factors have been linked with increased T2DM risk.

Their study involved 119 patients with T2DM and microalbuminuria who had taken part in the PANDA trial. Patients, who were aged >40 years, were randomly assigned to receive 10 mg or 80 mg of atorvastatin. Baseline, 6-month and 12-month circulating levels of

IGF-I, IGF-II, IGFBP-1 and IGFBP-3 were measured.

Levels of IGF-I, IGF-II and IGFBP-3 were significantly decreased from baseline overall, although no differences according to atorvastatin dose were found. IGFBP-1 levels, on the other hand, were unchanged with therapy overall, but varied significantly according to atorvastatin dose when the two dose-specific groups were compared.

“We are keen to study longitudinal changes in IGF concentrations in normoglycaemic individuals receiving low or high statin doses and also measure insulin resistance to further explore the associations of the IGF system with T2DM and its complications,” says Ram Narayanan.

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Original article Narayanan, R. P *et al.* Atorvastatin administration is associated with dose-related changes in IGF bioavailability. *Eur. J. Endocrinol.* doi:10.1530/EJE-12-0844