

## IN BRIEF

**DIABETES****Hypoglycaemia risk with dual use of DPP-4 inhibitors and sulphonylureas**

New research shows that concomitant use of dipeptidyl peptidase 4 (DPP-4) inhibitors and sulphonylureas increases the risk of hypoglycaemia in patients with type 2 diabetes mellitus (T2DM). The systematic review and meta-analysis included 10 studies, comprising 6,546 patients (4,020 received DPP-4 inhibitors plus sulphonylureas; 2,526 received placebo plus sulphonylureas) and included all currently available DPP-4 inhibitors. Risk of hypoglycaemia was increased by ~50% when a DPP-4 inhibitor was added to sulphonylureas to treat patients with T2DM (RR 1.52, 95% CI 1.29–1.8), leading to one excess case of hypoglycaemia in every 17 patients treated during the first 6 months. The investigators note their findings “highlight the need to respect existing recommendations for dose reduction of sulphonylureas when initiating treatment with DPP-4 inhibitors.” Assessing whether these recommendations reduce the risk of hypoglycaemia is now urgently required.

**ORIGINAL ARTICLE** Salvo, F. et al. Addition of dipeptidyl peptidase-4 inhibitors to sulphonylureas and risk of hypoglycaemia: systematic review and meta-analysis. *BMJ* 353, i2231 (2016)

**THYROID GLAND****Genetic insight into antithyroid drug-induced agranulocytosis in a European population**

The HLA allele *HLA-B\*27:05* on chromosome 6 is associated with antithyroid drug-induced agranulocytosis in white European individuals, according to a new genome-wide association study (GWAS). Three single nucleotide polymorphisms (SNPs; rs652888, rs199564443 and rs1071816) associated with this potentially life-threatening adverse effect of treating hyperthyroidism were also identified, one of which (rs1071816) was in moderate linkage disequilibrium with *HLA-B\*27:05*. The findings, which complement two earlier GWAS in Asian populations, are a step towards precision medicine for antithyroid drug-induced agranulocytosis, which could see carriers of *HLA-B\*27:05* or the three SNPs being offered alternative treatments for hyperthyroidism.

**ORIGINAL ARTICLE** Hallberg, P. et al. Genetic variants associated with antithyroid drug-induced agranulocytosis: a genome-wide association study in a European population. *Lancet Diabetes Endocrinol.* [http://dx.doi.org/10.1016/S2213-8587\(16\)00113-3](http://dx.doi.org/10.1016/S2213-8587(16)00113-3) (2016)

**PITUITARY GLAND****Sex difference in comorbidity burden associated with nonfunctioning pituitary adenomas**

Women with nonfunctioning pituitary adenomas (NFPA) have a higher incidence of comorbidities than men with NFPA, according to a new data. Using the Swedish National Patient Registry, researchers identified 2,795 patients (1,502 men and 1,293 women) diagnosed with NFPA between 1997 and 2011. Compared with the general Swedish population, women with NFPA had a higher standardized incidence ratio (SIR) than men with NFPA for type 2 diabetes mellitus (SIR: women 2.9; men 2.2) and cerebral infarction (SIR: women 2.3; men 1.3). Women, but not men, with NFPA also had an increased incidence of myocardial infarction and fractures (SIR 1.7 and 1.8, respectively). Although the reason for the sex-specific differences is unclear, the findings highlight the need to monitor all patients diagnosed with NFPA, especially women, and to provide adequate preventative treatment.

**ORIGINAL ARTICLE** Olsson, D. S. et al. Higher incidence of morbidity in women than men with non-functioning pituitary adenoma: a Swedish nationwide study. *Eur. J. Endocrinol.* <http://dx.doi.org/10.1530/EJE-16-0173> (2016)