

Methimazole and risk of acute pancreatitis

Methimazole, its prodrug carbimazole (hereafter MMI for both) and propylthiouracil (PTU) are thionamide compounds, which have been available for clinical use for more than 7 decades. Based on clinical experience, evaluation of efficacy, convenience in dosing, and side-effect profile MMI has become the most frequently prescribed anti-thyroid drug worldwide. The effectiveness of anti-thyroid drugs in reducing especially cardiovascular morbidities and overall mortality has been confirmed in several large scale observational studies.

In January 2019, based on just six after market reports, the European Medicines Agency (EMA) added acute pancreatitis to the list of serious adverse drug reactions to MMI. A subsequent Danish register-based and nationwide study by Brix et al. ([Lancet Diabetes Endocrinol.](#) 2020 Feb 5. pii: S2213-8587(20)30025-5. doi: 10.1016/S2213-8587(20)30025-5. [Epub ahead of print]) has associated ongoing MMI but not PTU use with a 56% increased risk of developing acute pancreatitis. This finding has received much publicity and has caused concern amongst physicians and patients alike. Clearly, if risk of developing acute pancreatitis differs between MMI and PTU users, drug preference could be affected. However, accepting that drug induced acute pancreatitis is a rare event (less than 5% of cases of acute pancreatitis are drug related) the reported 56% increased relative risk will account for a small number of cases of MMI induced acute pancreatitis. Further studies, that balance overall advantages and disadvantages, are needed before changing the currently recommended use of MMI as the primary drug for the treatment of hyperthyroidism.

As a consequence of the aforementioned, it is the recommendation of the ETA that patients are given oral as well as written information on this possible serious side effect of MMI, in a balanced way. And, that MMI, in individuals without contraindications, is maintained as the drug of choice for hyperthyroid patients offered antithyroid drug treatment. This finding does not affect the current recommendation of using PTU in the first trimester of pregnancy.

On behalf of the Executive Committee of the ETA



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