

Iatrogenic thyroid diseases---Focusing on drug-induced thyroid dysfunctions

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“Iatrogenic” means any adverse condition in a patient resulting from treatment by a physician, nurse, allied health professional. Iatrogenic disorders are an important cause of morbidity, mortality, and admission to hospital in the worldwide. Normal thyroid secretion depends on thyroid-stimulating hormone (TSH), which is inhibited by thyroid hormones and stimulated by endogenous thyrotropin-releasing hormone (TRH). Similar to many other organs, the thyroid gland may be affected by various drugs, often used for the treatment of non-thyroid disorders. Drug may affect thyroid function via different mechanisms, including thyroid hormone production, storage, transport and metabolism offering numerous targets for drug interventions. Usually, the effect of pharmacotherapy is observed more frequently and is stronger in case of the presence of the concomitant disorder of thyroid gland. The drugs which may cause thyrotoxicosis include interferon, molecular-targeted agents, amiodarone and so on. Those which cause hypothyroidism included anti-thyroid drugs, lithium, and iodine etc. which inhibit thyroid hormone synthesis and secretion, and dopamine etc. which block TSH secretion. An understanding of the proposed mechanisms of these drug interactions and their evaluation and differential diagnosis is helpful in the interpretation of the findings associated thyroid disorders and in establishing the correct treatment. Therefore, it is important to review the present state of knowledge on the influence of various drugs on the hypothalamic-pituitary-thyroid axis and concern the diagnosis and treatment of iatrogenic thyroid dysfunctions.