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**A case of Thyrotoxicosis needing Lithium prior to Radio Iodine treatment**

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Mr.G.C is a 34 year gentleman who has been thyrotoxic secondary to Graves' disease for 5 years due to non-attendance to clinic appointments and non-concordance with antithyroid medication. He has a small homogeneous goitre and no thyroid eye disease. He remained clinically and biochemically thyrotoxic despite Carbimazole 40 mg once-daily and Propranolol 40 mg twice-daily, but with fluctuating thyroid function tests suggesting intermittent concordance with medication. Latest biochemistry showed fT4-33.3 pmol/l (12-23), TSH < 0.01, TBII-8.8 U/l, Thyroid microsomal antibodies-positive 1/1600 titre.

In view of his ongoing uncontrolled but relatively mild thyrotoxicosis, we felt that Radio Iodine with Lithium preparation would be a safer option for definitive therapy than thyroidectomy with sodium ipodate preparation. We commenced Lithium carbonate SR 400mg twice-daily and monitored Lithium levels & Thyroid blood tests weekly. He tolerated Lithium well without adverse effects. Lithium levels were 0.40 mmol/l (0.40-1.0) He became biochemically euthyroid (fT4- 15.4pmol/l, fT3- 4.9pmol/l, TSH <0.01) after 2 weeks of commencing lithium, the first time he had been biochemically euthyroid to our knowledge for 5 years. He received 600 MBq I-131 without complication one month after commencing Lithium.

This case serves as a reminder of the utility and safety of Lithium to achieve euthyroidism prior to Radio Iodine treatment for Thyrotoxicosis.

