## EP_A159

### SHIFTING SPECTACLE OF THYROID ANTIBODIES: A UNIQUE PRESENTATION

https://doi.org/10.15605/jafes.039.S1.170

**Abd Jalil bin Abd Aziz and Fadzliana Hanum Jalal**
*1Medical Department, Hospital Shah Alam, Malaysia*

**INTRODUCTION/BACKGROUND**
Graves' disease typically manifests with hyperthyroidism. However, the switch between TSH receptor-stimulating antibodies (TSAb) and TSH receptor-blocking antibodies (TSB Ab) is uncommon. We discuss three patients with Graves' disease who switched between hypothyroidism and hyperthyroidism throughout the course of their disease.

**CASE**
Case A involves a 44-year-old female with initial diagnosis of hyperthyroidism. She was treated with carbimazole for two years and remained euthyroid for a few years without medication. Four years following the diagnosis, she developed overt hypothyroidism requiring levothyroxine. She remained hypothyroid for nine years until her TSH levels trended towards the lower end, hence, she was restarted on carbimazole. She had elevated TRAb [2.0 IU/L, N: <1.75] and anti-TPO [890 IU/ml, N:<9] at screening. Her neck ultrasound showed a goitre with a solitary left thyroid nodule.

Case B involves a 68-year-old male diagnosed with hyperthyroidism [FT4: 140 pmol/L, TSH:0.008 m IU/L]. Twelve months following diagnosis, he developed overt hypothyroidism while on low dose carbimazole and eventually required levothyroxine. Thyroid antibodies were elevated [TRAb 37 IU/L and anti-TPO 534 IU/ml]. His neck ultrasound revealed a small thyroid nodule with benign features.

Case C is a 43-year-old female who presented with overt hypothyroidism [Ft4 9 pmol/L,TSH 95.75 m IU/L] and was treated with levothyroxine. Initial antibodies were elevated [anti-TPO 235 IU/ml, anti-Tg 104.8 IU/ml]. Three years following diagnosis, her TSH levels trended towards the lower ranges and eventually showed overt hyperthyroidism [FT4 28, TSH <0.008]. She was commenced on oral carbimazole. Repeat antibodies were elevated [anti-Tg 30 IU/ml, anti-TPO 218.25 IU/ml, TRAb 23.8 IU/L]. Her neck ultrasound showed multiple subcentimetre thyroid nodules.

**CONCLUSION**
Graves' disease is characterized by the presence of TRAb, which can exhibit either TSAb or TSB Ab activity. Treatment with anti-thyroid drugs (ATD) such as carbimazole may further trigger the switch to hypothyroidism. Therefore, close monitoring and follow-up are crucial for these patients.

## EP_A160

### A RARE CASE OF THYROTOXICOSIS PRESENTING AS HYPERBILIRUBINAEMIA

https://doi.org/10.15605/jafes.039.S1.171

**Meng Loong Mok,[1] Subashini Rajoo,[1] Pei Yeing Teoh,[2] Sugunah Sallapan[2]**
*[1]Endocrine Unit, Department of Medicine, Hospital Kuala Lumpur, Malaysia*
*[2]Department of Pathology, Hospital Kuala Lumpur, Malaysia*

**INTRODUCTION/BACKGROUND**
Hyperthyroidism affects multiple body systems, including the nervous, cardiovascular, gastrointestinal, and hepatobiliary systems. Presentation of severe cholestatic jaundice in thyrotoxicosis, although uncommon, has been described in literature.

**CASE**
A 28-year-old Malay male presented with 1-week history of painless jaundice, associated with tea-coloured urine and diarrhoea. He also had a significant weight loss of 12 kg over the past 10 months. Physical examination showed an underweight young male, deeply jaundiced, with fine tremors. He was normotensive and not tachycardic. He did not have a goitre, thyroid eye disease or pretibial myxoedema. He had no stigmata of chronic liver disease. Blood investigation showed transaminitis with conjugated hyperbilirubinemia, with ALT 174 IU/L, AST 112 IU/L, total bilirubin 357 µmol/L, and predominant direct bilirubin (252 µmol/L). Autoimmune, infectious, and primary hepatobiliary disorders were ruled out. Thyroid function test was taken on day 16 of admission, which showed suppressed TSH <0.01 m IU/L, and elevated free T4 at 77 pmol/L. He was started on carbimazole, prednisolone and cholestyramine. carbimazole was withheld after 1 week of treatment in view of worsening hyperbilirubinemia and transaminitis. Subsequently, he received radioactive iodine therapy after 3 weeks of treatment. He had clinical and biochemical improvement after the radioactive iodine therapy. He eventually progressed into a hypothyroid state. His bilirubin levels subsequently normalized.

**CONCLUSION**
Severe jaundice is a rare consequence of hyperthyroidism and can be due to various pathologies. A thorough investigation should be done to look for contributing