SAT-571

Tocilizumab (TCZ) is a monoclonal antibody against the IL-6receptor used in the treatment of rheumatoid arthritis (RA). Hypertriglyceridemia is a rare side effect of TCZ, occurring in<1% of cases (1).

A 37 year-old woman presented with abdominal pain, nausea and diarrhea. Her past medical history included RA and dyslipidemia; she had no history of diabetes, hypothyroidism, renal disease, alcoholism or recent medication changes. Following failure of other immunosuppressant agents, IV TCZ was initiated. After two and a half years, TCZ formulation was changed to subcutaneous injections for convenience about 6 weeks prior to presentation. Family history included mother with dyslipidemia. Her vital signs were normal on admission with

labs remarkable for lipase of 332 and triglycerides (TG) of 5680. Her TG 2months prior to initiating subcutaneous tocilizumab therapy was 1373. CT abdomen demonstrated findings of acute pancreatitis (AP). She was subsequently admitted to the ICU and started on an insulin drip, fibrate, statin and fish oil along with supportive care. TCZ was held. Because her TGs remained severely elevated, she was transferred to our facility for plasmapheresis with subsequent improvement of the same to 768 after two treatments. TCZ was considered the probable etiology of her hypertriglyceridemia with subsequent AP after ruling out other secondary causes. Hereditary hypertriglyceridemia, given her family history, likely contributed to her chronically elevated TG's. TCZ has been reported to increase TG levels mainly through an increase in VLDL-TG content. TCZ was found to reduce hepatic LDLr expression thus reducing hepatic clearance of TGs and LPL mediated lipolysis of TG-rich lipoproteins (2). Despite the association of TCZ with increased

lipid levels, it has a favorable impact on lipid metabolism via improved functionality of HDL-C and no impact in the atherogenic index; patients also experience a favorable response to statin treatment (3). In observational studies, TCZ shows a favorable effect on myocardial infarction compared to other biologic agents for RA, attributed partly to a decrease in lipoprotein(a) levels. Nonetheless, it should be used in caution in those with high cardiovascular risk, especially

dyslipidemia (4).

1. Flaig T, Douros A. Tocilizumab-induced pancreatitis:case report and review of data from the FDA Adverse Event Reporting System. Journal of Clinical Pharmacy and Therapeutics 2016, 41:718-721.

2. Strang A, Bisoendial R. Atherosclerosis 229(2013):174-181.

3. Garcıa-Gomez C, Martın-Martınez M. Lipoprotein(a) concentrations in rheumatoid arthritis on biologic therapy:Results from the CARdiovascular inrheuMAtology study project. Journal of

Clinical Lipidology (2017) 11:749-756.

4. CastagnéB, Viprey M. Cardiovascular safety of tocilizumab: A systematic review and network meta-analysis. PLoS ONE 14(8):e0220178.

Thyroid

THYROID CANCER CASE REPORTS I

Risk of Thyroid Cancer in McCune-Albright Syndrome

Sarah L. Bick, MD, Linda J. Steinkrauss, APN, Mihir M. Thacker, MD, Loren Berman, MD, Anthony W. Gannon, MD, MSCE.

Nemours / AI DuPont Hospital for Children, Wilmington, DE, USA.

SUN-476

Background: McCune-Albright syndrome (MAS) is a well described genetic syndrome characterized by café-au-lait spots, polyostotic fibrous dysplasia, and hyperfunctioning endocrinopathies. Hyperthyroidism is a common endocrine manifestation of MAS, but thyroid nodules are less frequently observed. Thyroid cancer is generally considered uncommon in patients affected by MAS.

Clinical Case: A 15-year-old male was referred to endocrinology for evaluation of polyostotic fibrous dysplasia with onset at 6 years old. He had no café-au-lait spots and initial labwork revealed no endocrine abnormalities. Subsequent labwork revealed non-autoimmune hyperthyroidism, leading to a diagnosis of MAS. Repeat clinical assessment revealed a goiter. 123-I uptake and scan revealed diffusely increased uptake throughout the gland with increased intensity in two regions of the right lobe separated by a region of photopenia. Ultrasound demonstrated three right-sided thyroid nodules – two correlating with the areas of increased iodine uptake and one with the area of photopenia. The left lobe of the thyroid was normal. FNA biopsy was performed and cytopathology was consistent with Bethesda II and III for the hyperfunctioning nodules and Bethesda VI for the cold nodule.

The patient received total thyroidectomy with right-sided central neck dissection, and he was found to have multiple foci of papillary thyroid carcinoma with central neck metastases. The largest hyperfunctioning thyroid nodule was benign. He received radioactive iodine ablation which demonstrated no distant metastases and has had no evidence of recurrent disease.

Conclusions: Hyperthyroidism is a common manifestation of MAS, but thyroid nodules are much less frequently observed, and thyroid cancer is considered quite rare. This patient developed TSH-independent hyperthyroidism in normal thyroid cells as well as in two hyperfunctioning thyroid nodules. He developed two contemporaneous classical papillary thyroid cancers – one manifesting as a nonfunctioning thyroid nodule and one manifesting as a thyrotoxic nodule with lymphatic invasion.

We conclude that individuals with MAS may be at an increased risk for thyroid nodules and thyroid cancer, although the data are not well established. Clinicians should have a low threshold for thyroid ultrasound in patients with MAS and goiter.

Reference: (1) Collins, M. T., Sarlis, N. J., Merino, M. J., Monroe, J., Crawford, S. E., Krakoff, J. A., Guthrie, L. C., Bonat, S., Robey, P. G., & Shenker, A. (2003). Thyroid carcinoma in the McCune-Albright syndrome: contributory role of activating Gsα mutations. *The Journal of Clinical Endocrinology & Metabolism*, *88*(9), 4413-4417.

(2) Hannon, T. S., Noonan, K., Steinmetz, R., Eugster, E. A., Levine, M. A., & Pescovitz, O. H. (2003). Is McCune-Albright syndrome overlooked in subjects with fibrous dysplasia of bone?. *The Journal of pediatrics*, *142*(5), 532-538.