

# **Vasculitis in thyrotoxicosis Is it drug induced or disease related?**

Thesis

Submitted for Partial fulfillment of M.D degree in Internal Medicine

By

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2015

## **ABSTRACT**

In the last few years, there was an increased incidence of vasculitis in patients with thyrotoxicosis. Those vasculitic reactions ranged from simple purpuric skin lesion to severe intra-alveolar hemorrhage and even to Steven Johnson Syndrome (SJS). Most of those vasculitic reactions occurred in patients receiving propylthiouracil or methimazole (Noh et al., 2009). However, many other cases were detected in thyrotoxic patients not receiving those medications (Lee et al., 2007).

In our study MPO-ANCA (p-ANCA) levels in plasma are evaluated as an indicator of vasculitis in 100 male and female thyrotoxic patients, 25 Grave's on treatment, 25 Grave's on no treatment, 25 thyrotoxic (nodular or multinodular) on treatment, 25 thyrotoxic (solitary nodular or multinodular) on no treatment, and a control group of 25 healthy subjects. All patients were subjected to detailed clinical examination and investigations which included CBC, T3, T4, TSH, CBC, ESR, ALT, AST, urine analysis, p-ANCA and anti-thyroglobulin antibodies.

Results showed that p-ANCA (MPO-ANCA) levels were significantly higher in patients received anti-thyroid treatment, and were negative in control group with a P-value < 0.001. In addition, p-ANCA levels were significantly higher in those who received propylthiouracil than in those who received carbimazol with a P-value < 0.001.

p-ANCA levels were higher in patients with proteinuria than those with normal urine analysis with a P-value 0.01, and was significantly higher in patients with both arthralgia and skin rash, skin rash alone and arthralgia alone than those without these findings with a P-value < 0.01. They were also significantly higher in patients with skin lesions than those without such finding) with a P-value < 0.01.

There was statistically significant positive strong correlation between p-ANCA levels and dose of treatment with p-value < 0.05, and statistically significant positive moderate correlation between p-ANCA levels and duration of treatment with p-value < 0.05. While correlation between p-ANCA and thyroid hormones profile after controlling the dose and duration of treatment revealed that there was no statistically significant correlation between p-ANCA levels and level of T3, T4 and TSH.

**Keywords:** p-ANCA, thyrotoxicosis, propylthiouracil and methemazol.