**Milos Zarkovic**

**HASHIMOTO S  ENCEPHALOPATHY**

**Abstract**: Changes in the affective and cognitive function usually accompany thyroid gland dysfunction. In autoimmune thyroid disease these changes can be caused by the thyroid dysfunction (hypo- or hyperthyroidism) or be associated with the presence of antithyroid antibodies.

Even a small change in thyroid hormone concentration is associated with change in cognitive function. In euthyroid older males variation in total and free thyroxin explain about 10 % of Wechsler adult intelligence test variance. In euthyroid, females cognitive function decline, measured using Mini Mental test, also correlates with blood thyroxin. Short-term (4 weeks) hypothyroidism induces clinically significant cognitive dysfunction, which is reversible by thyroid hormone substitution. Mild hypothyroidism (TSH less than 10) also induces reversible cognitive dysfunction. In hypothyroidism, PET scanning shows global reduction in brain blood flow and glucose metabolism.

Hashimoto's encephalopathy is characterized by the corticosteroid reversible encephalopathy associated with the presence of antithyroid antibodies. Encephalopathy can be manifested as multiple stroke-like episodes (vasculitis like), or as diffuse, progressive type characterized by the dementia and psychiatric symptoms. In euthyroid patients with Hashimoto's thyroiditis and no evidence of neurological disease, SPECT showed brain perfusion abnormalities. Post mortem and brain biopsy findings can be normal or show perivascular lymphocytic infiltration.

Recently, presence of antineuronal antibodies were found in patients with Hashimoto's thyroiditis. Specific high reactivity against human á-enolase was high in patients with Hashimoto's encephalopathy, but absent in patients with other neurological disorders and healthy subjects. In another group of Hashimoto's encephalopathy patients specific antineural antibodies were found. Furthermore, Ferracci et al, found antithyroid antibodies in the CSF of patients with Hashimoto's encephalopathy.