Viral and other infections in community and primary hypothyroidism – cause or coincidence?

Author: Jayanta Chakraborty

**Aims**

Prevalence of primary hypothyroidism is increasingly keeping close pace with type 2 diabetes mellitus. The overall prevalence of hypothyroidism was 10.95% in India. Following a national strategy of supplementing salt with iodine, the bulk of primary hypothyroidism is now due to autoimmune thyroid destruction. In addition to genetic predisposition, environmental factors play a key role in autoimmunity. Viruses are important triggers of molecular mimicry and autoimmune disorders. Several autoimmune diseases like type 1 diabetes and Guillain-Barré syndrome have an infection background. This study was undertaken to unveil any infectious background of primary hypothyroidism.

**Methods**

A total of 32 subjects were included in the study. 18 were primary hypothyroid and 14 were euthyroid as a control group. All subjects were screened for recent and remote prevalent community viral and parasitic infections. Wilcoxon Mann-Whitney test was used to find the significance of study parameters. The chi-square/Fisher’s exact test was used.

**Results**

The seropositivity of cytomegalovirus (CMV) was 94.12% in hypothyroid patients, compared with 64.19% in the control group, which is statistically significant (p=0.037).

**Conclusions**

A statistically significant increased prevalence of cytomegalovirus infection was noted in hypothyroid subjects compared with controls.

Inference: The seropositivity of CMV is 94.12% in hypothyroid subjects higher as compared to 64.19% in controls, which is statistically significant (p=0.037).

Inference: The rubella immunoglobulin G seropositivity was positive in 88.24% of hypothyroid but only 71.43% of control subjects, which is not statistically significant, (p-value 0.36, as computed by Fisher’s exact test).

**Conflict of interest statement**

There is no conflict of interest.