

VII. SUMMARY

Researching Serum Melanocortin Levels and Inflammatory Cytokine Levels in Vitiligo Patients

Aim-hypothesis: This study aims at contributing to the pathogenesis of vitiligo by comparing melanocortin levels and inflammatory cytokine levels according to the activity, duration, clinical type and to age groups and gender of the patients.

Method: Study population consisted of 44 vitiligo patients between the age of 8-70 who have got the diagnosis of vitiligo clinically and 44 healthy individuals with age and gender consistence as control group. 15 among the patients and 13 among the control group were 15 years old and below. All vitiligo patients were examined with Wood lamp during their initial admission. The age of onset of illness, its duration and activity-stability were questioned. α -MSH, IL-1 α , IL-6, TNF- α , cortisol and ACTH levels in the plasma and serum were measured.

Results: Plasma α -MSH levels of vitiligo patients group were found statistically significant lower than those of the control group ($p < 0,0005$). Both plasma ACTH level ($p = 0,008$) and serum cortisol level ($p = 0,044$) were found statistically significant higher in the patients' group versus the control group. Serum TNF- α levels did not yield a statistically significant difference between patient and control groups ($p > 0,05$). Serum IL-1 α and IL-6 levels were observed statistically significant higher in vitiligo patients group ($p < 0,0005$). No statistically significant difference was observed between α -MSH, ACTH, cortisol, TNF- α , IL-1 α and IL-6 levels of child and adult age groups, female-male gender, active-stable and generalized-localized type patients ($p > 0,05$).

Conclusion: The actual reason of melanocyte destruction in vitiligo is still not known. It is assumed that the disease is among autoimmune diseases. Due to the fact that it requires a long and difficult treatment, new treatments are being sought. In our study, it has been found that plasma α -MSH levels in vitiligo patients are not related to activity, clinical type and duration of the disease and age and gender of the patients. The fact that plasma α -MSH levels were found as low in the patients leads to the assumption that the systemic use of α -MSH and analogues is possible in treatment and that it can be among the treatment methods of the future. In this study, it was also observed that proinflammatory cytokine levels are not an indicator for the course of the disease. However, using anti-TNF- α agents in vitiligo treatment and having successful outcomes should be considered as well. None of the patients included in our study have autoimmune diseases which are regarded as a reason of high ACTH and cortisol levels.

As these parameters can increase with the effect of other stress factors, future studies can focus on the relation between ACTH and cortisol levels and stress in vitiligo patients.