

Is serum selenium concentration associated with the development of age-related cataract?

Michał Post

Department of Ophthalmology, Pomeranian Medical University, Szczecin, Poland

Purpose: To evaluate the correlation between the occurrence of age-related cataract and the concentration of serum selenium.

Methods: The study group included 95 cataract patients, aged 56-89 years, not suffering from other diseases of the eye nor systemic diseases with proven impact on the eye function/electrolytes. Control group consisted of 187 healthy subjects. Selection criteria for the control group were: sex, age, smoking. People taking supplements were excluded from the study. Measurement of the serum selenium concentration was carried out by Inductively Coupled Plasma Mass Spectrometry (ICP-MS). The statistical analysis was performed by Fischer`s exact test.

Results: 1) The lower levels of selenium were associated with greater occurrence of cataract, 2) The threshold point of selenium was ~70 µg/l (female) and ~73 µg/l (male) for an increase in age-related cataract occurrence

Conclusions: 1) The concentration of selenium in the blood may be a marker of occurrence of age-related cataracts. 2) The low selenium levels may be a risk factor for age-related cataract in the Polish population.

Key words: selenium, age-related cataract