**Wpływ terapii antyretrowirusowej na wybrane aspekty ryzyka sercowo-naczyniowego i parametry immunologiczne u zakażonych HIV**

**Streszczenie w języku angielskim**

**The impact of antiretroviral therapy on selected aspects of cardiovascular risk and immune recovery among people with HIV**

Antiretroviral therapy significantly contributed to the improvement in quality of life and life expectancy of people living with HIV. It was possible due to immune reconstitution following the inhibition of HIV replication. Antiretroviral therapy has decreased the number of AIDS-related diseases, while non-AIDS conditions, especially cardiovascular disease, started to occur more often. There are many factors impacting the change in most prevalent diseases in this population and one of them is antiretroviral therapy itself.

The dissertation consists of three publications: two original papers and one review article. The aim of the original manuscripts was the assessment of the impact of antiretroviral therapy on selected aspects of cardiovascular risk and immune reconstitution in people living with HIV. It was performed by the analysis of VCAM-1 concentration and lipid profile depending on applying antiretroviral treatment and its length. 5-year observation of changes in lymphocyte T CD4+ and lymphocyte T CD4+:CD8+ after antiretroviral treatment implementation was also performed. The additional purpose was the analysis of factors impacting VCAM-1 concentration and the chance of normalizing immune parameters. The aim of the review article was to summarize most recent knowledge concerning factors impacting cardiovascular risk in people living with HIV, including antiretroviral treatment and immune parameters.

The studies have shown that people living with HIV undergoing antiretroviral therapy longer than a year had significantly lower VCAM-1 concentration than patients not receiving therapy. Simultaneously, higher concentrations of total and LDL cholesterol were observed in patients undergoing treatment comparison to the treatment-naïve patients, which makes it difficult to assess cardiovascular risk explicitly. Studies have also shown that despite undetectable HIV viral load, majority of patients did not experience complete immune reconstitution. The factors positively associated with the chance of the normalization of immune parameters were: age below 35 years old, high lymphocyte T CD4+ count and high HIV viral load at the beginning of antiretroviral treatment and starting the therapy during acute HIV infection.

The results imply that antiretroviral therapy may have both beneficial and adverse influences on cardiovascular risk and does not guarantee complete immune reconstitution. However, its absence leads to the impairment of the immune system and consequently to death. Early HIV diagnosis and introduction of antiretroviral therapy improves the chances of immune recovery. Moreover, all patients undergoing antiretroviral therapy should be regularly and precisely accessed in terms of cardiovascular disease.