

ABSTRACT

The aim of presented diploma thesis coming out of the project held by II. interní klinika Všeobecná fakultní nemocnice v Praze is to determinate the risk assessment for development of acute coronary syndrome based on non-invasive examinations – intracoronary ultrasound, retinal arteries examination, biochemical markers of atherosclerosis and selected genes polymorphism.

The thesis is divided into two main parts. The first part is theoretical and it consists of three chapters, the second part is analytical and it contains the research. The theoretical part gives concise information about the acute coronary syndrome, essential part focuses on atherosclerosis as a pathophysiologic base of this syndrome, risk factors, and stratification of cardiovascular risk which proved to be insufficient are as well mentioned. Next part describes a non-invasive coronary arteries examinations focusing on presented research. The last chapter of the theoretical part focuses on invasive coronary arteries examinations.

The research part describes design and purpose of the project – the identification the high risk for development of acute coronary syndrome patients irrespective of the risk coming out standard evaluation models, and the prediction of coronary atherosclerosis during aggressive hypolipidemic therapy. The epidemiologic outcomes and invasive examination findings of 107 patients suffering from ischemic heart disease are statistically validated. The research findings confirm one of three hypotheses determined before the beginning of the study. The genetic examination of hemoxygenase-1, carotid ultrasound, and apolipoprotein A biochemical examination improve the current predicting evaluation models of the coronary risk findings.

The limitations of the thesis is ongoing analysis the ophthalmological examinations and scoring the regression of coronary atherosclerosis during hypolipidemic therapy and thus impossibility to prove all hypotheses.

Further attachments of certain chapters can be found in the appendix.

KEY WORDS

Acute coronary syndrome, atherosclerosis, non-invasive examinations, prediction