

## Introduction

This year the Department of Cardiology of the Postgraduate Medical School (CMKP) celebrates the 35<sup>th</sup> anniversary. The history of this academic centre of cardiology began 41 years ago and it served for the first 6 years as the Centre for Research and Teaching of Medical University in Warsaw. Anniversary celebrations as well as this supplement of the "Progress in Medicine" are dedicated to Late Professor Leszek Ceremużyński, the Founder and Director of the Department of Cardiology CMKP for many years.

We begin this special issue by presenting of a long history and contemporary status of the Department of Cardiology CMKP in Grochowski Hospital.

This anniversary issue of "Progress in Medicine" consists of series of review articles written by the members of the team of our Department, presenting their areas of interest and clinical experience.

Aging patient population is one of the main and typical problems of contemporary medicine with which we deal in our Department of Cardiology. During last 10 years mean age of the patients hospitalized in our Intensive Cardiac Care Unit increased from 65 to 70 years. Percentage of patients over 75 of age exceeded 40. Patient risk and also diagnostic and therapeutic difficulties are increased by frequent occurrence of comorbidities in this population. A series of first 7 articles is dedicated to this problem. Pathophysiological distinctions and specific diagnostic and therapeutic recommendations for the elderly are presented. Management in elderly patients with acute coronary syndromes (ACS), stable angina, and heart failure is analyzed in details. One of the articles concerns the clinical impact of comorbidities, frailty, and disability in elderly patients. Difficult decisions regarding qualifications or disqualifications of such patient for invasive management are related to these issues. The articles about specific invasive treatment of coronary artery disease, arrhythmias and electrotherapy are dedicated to this problem. It is worth mentioning that the oldest patient in whom coronary angiography was performed was 98 of age, percutaneous coronary angioplasty 98 years, pacemaker implantation 106 years and ablation 95 years. Sometimes disqualification from invasive therapy is more difficult than performing the procedure. However, the rule is to balance carefully the risk and potential benefit from proposed treatment, about what we write in few articles in this supplement. The paper dedicated to the echocardiographic images of the heart of elderly people ends the series of articles concerning geriatric patients.

In the Department the patients in young age are also treated, among them people with early development of atherosclerosis. This topic is in the scope of research interest of our Department. The article about distinct features of coronary artery disease in young age and early primary prevention is dedicated to this topic.

The subsequent articles are also related to the research conducted in the Department. The first paper deals with diagnosis and treatment of diabetes in ACS. It is related to the study, in which the results of coronary angioplasty in ACS were compared in patients with or without diabetes.

The next paper concerns an interesting and unexplained topic of "smoker's paradox". This phenomenon consists of obtaining paradoxically better results of fibrinolytic therapy in acute myocardial infarction and clopidogrel treatment in ACS in smokers compared to nonsmokers. In the view of commonly recognized recommendation of smoking cessation in patients with ACS, the question arises whether there is a potentially negative effect of such a recommendation.

Another paper is dedicated to echocardiographic assessment of the left atrium in patients exposed to ablation in atrial fibrillation. With the use of transesophageal or intracardiac echocardiography it is possible to assess atrial morphology, and occurrence of thrombi or echogenic blood. The study attempts to answer the question whether the results of echocardiographic examinations may reveal the efficacy and safety of ablation therapy.

In the next paper the information on atrial infarction is presented. It is a disease rather difficult to diagnose, occurs rarely as isolated pathology, but more frequently as a disease accompanying the infarction of the ventricle. It is accompanied sometimes by persistent arrhythmias and hemodynamic disturbances. It may raise interest, because not much attention is put to this issue.

In the Department the Catheterization Laboratory has been working intensively since 2002, providing permanent call for invasive treatment of ACS. The laboratory closely cooperates with the Acute Cardiac Care Unit. We pay special attention to the risk stratification in ACS including angiographic data. The consecutive paper is dedicated to this issue. The attention is paid to a dynamic character of risk in ACS and to the value and feasibility of application of risk scores at discharge in patients with myocardial infarction with ST segment elevation.

In the Department radial approach in coronary interventions is used in over 90% of cases. This technique is significantly safer and suitable for patients comparing with femoral approach. Our Catheterization Laboratory is one of the precursors in application of this technique and has a large experience in this field. In some cases radial approach may be unavailable. A potential solution is the use of ulnar access. The next paper deals with the optimization of arterial access in invasive cardiology.

The next interesting topic studied in the Department is the comparison of the methods of physical capacity assessment by electrocardiographic, ergospirometric and echocardiographic stress test. In the Department ergospiroechocardiographic stress tests are performed. In a consecutive article potential benefits of the use of this complex and laborious examination are described.

At the end we present the article concerning the practice used at our Intensive Cardiac Care Unit, namely the application of complex ultrasonography: echocardiography, vascular ultrasonography and organ ultrasonography. We use on everyday basis a high quality echocardiograph equipped with additional vascular and convex type probes. Complex ultrasonographic examination in intensive care facilitates diagnosis and treatment, for patients' benefit. We hope that this article will encourage our colleagues physicians to more frequent use of complex ultrasonography in intensive care.

I would like to invite you to read these articles and also attend the Anniversary Scientific and Educational Session on the occasion of 35 years of the Department of Cardiology CMKP, on the 1<sup>st</sup> of December 2015.

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