Diagnosis of Pulmonary Hypertension Associated with Congenital Heart Disease (PH-CHD) in Latvia

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Introduction. Pulmonary hypertension is a pathophysiological disorder that can be a complication of a wide amount of both congenital and acquired cardiovascular and respiratory diseases as well as multiple other conditions. It is characterized by mean pulmonary artery pressure of 25 mmHg or more at rest as assessed by right heart catheterization. A register including pulmonary artery hypertension patients in Latvia was started back in 2007.

Aim, Materials and Methods. The aim of the research is to analyze and compare diagnostic capabilities in the first five years (2007–2012) the register was used with the consequtive five years (2012–2017). Only patients with pulmonary hypertension associated with congenital heart disease (PAH-CHD) were included. Variables included were age at time of diagnosis and hemodynamic data available from right heart catheterization as a characteristic value of severity of disease.

Results. 44 patients, 33 females and 11 males with PAH-CHD, were included in the research. Whilst comparing the two patient groups, it was evident that the distribution of patients in genders did not change over the years – approximately 1 male patient to every 3 female patients in both groups. Although the mean age of the diagnosed patients had increased from 49.32 ± 18.24 years to 55.36 ± 18.69 years, the mean pulmonary artery pressure at time of diagnosis decreased from 66.23 ± 19.65 mmHg in years 2007–2012 to 47.76 ± 21.55 mmHg in years 2012–2017. Pressure in right ventricle during systole had decreased from 99.84 ± 29.72 mmHg in years 2007–2012 to 70.82 ± 27.02 mmHg in years 2012–2017 and the pulmonary vascular resistance had decreased from 13.54 ± 7.34 WU to 10.92 ± 19.18 WU, respectively. Other hemodynamic values such as systolic and diastolic pulmonary artery pressure, mean and diastolic right ventricle pressure and mean right atrial pressure had decreased significantly as well.

Conclusions. The decrease of blood pressure right atrium, right ventricle and pulmonary artery over the years means that patients are being diagnosed in earlier stages of the disease now compared to the first five years the register was introduced.