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BOOK OF ABSTRACTS

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Approaches to the treatment of patients with end-stage renal disease in Ukraine

Serhii Hryshchuk¹, Alla Harlinska¹, Natalia Korniychuk¹, Valentin Parii²

¹ Zhytomyr Ivan Franko State University, Zhytomyr, Ukraine

² Bogomolets National Medical University, Kyiv, Ukraine

The number of patients with chronic kidney disease (CKD) is increasing worldwide, with CKD now seen as a global epidemic enhanced by increasing rates of diabetes and hypertension. The World Health Organization (WHO) estimated that there were 230 million people globally with CKD in 2015. This is a concern as it is believed currently only a few countries are able to fully meet the medical needs of these patients. This situation will get worse unless this is addressed as a result of increasing rates of hypertension and diabetes mellitus, especially in lower and middle-income countries (LMICs), which includes Ukraine. It is estimated that by 2030 > 70% of patients worldwide with end-stage renal disease (ESRD) will be in developing countries unless key issues and concerns are addressed.

ESRD contributes significantly to morbidity and mortality, decreasing life expectancy, whilst its management consumes an appreciable proportion of healthcare resources across countries including developing countries. It is estimated that up to 6% of the annual healthcare budget is spent on patients with ESRD in developed countries. The optimal management of ESRD requires renal replacement therapy in the form of either dialysis or renal transplantation. In the context of constrained budgets and rising patient demand for renal transplantation, many countries resort to dialysis as the initial preferred option for the management of ESRD. As a result, dialysis programs have shown an annual growth approximately 10% over the past 20 years in developing countries.

Due to an increase in the prevalence and financial burden of ESRD, a number of countries have undertaken studies to determine the cost of renal transplantation as well as haemodialysis (HD) and peritoneal dialysis (PD). However, these studies have drawn different conclusions, primarily due to the economic differences between high-, middle- and low-income countries. The disparities in the cost of HD and PD between high-income countries and LMICs might be attributed to a number of factors including lower wage rates among healthcare workers in low-income countries, which may result in lower costs of HD when compared with PD. PD will generally also cost less in countries that have capacity for local manufacture of materials used in PD as well as in countries with a higher prevalence of patients undergoing PD owing to economies of scale. This mix of factors will have an impact on overall dialysis costs in each country. Although PD is typically less expensive compared with HD in many parts of the world, the choice of dialysis modality may be influenced by other factors such as patient-population considerations, financial reimbursement, and incentives.

In Ukraine, in 2018, according to the «National Register of CKD Patients», there were 8810 patients with ESRD. Among them, 6765 patients were treated by the hemodialysis (for the first time this year, 1414 patients), 786 patients were treated by the peritoneal dialysis (137 of them for the first time). Kidney transplantation was performed for 1259 patients, of which 112 for the first time.

The accessibility index for treating patients with hemodialysis and peritoneal dialysis in Ukraine is 39% (in the European Union - 92-100%). The prevalence of treatment with these methods in Ukraine is 210 per 1 million of the population, and in the European Union - 823 per 1 million. The rate of ESRD treatment with kidney transplantation in Ukraine is 3 per 1 million people, which is the lowest in Europe (average 32 per 1 million).

Therefore, it is necessary to conduct a comparative analysis of the cost of treating patients with ESRD by kidney transplantation and hemodialysis or peritoneal dialysis to inform future policies in Ukraine.