

KIDNEY REPLACEMENT THERAPY: PROS AND CONS

DILIP KUMAR ROY

Professor(Rtd), Dept of Nephrology, National Institute of Kidney Disease & Urology (NIKDU), Sher-e-Bangla Nagar, Dhaka, Bangladesh Email: drdilipkroy@gmail.com

Kidney replacement therapy (KRT) is a term used to encompass life-supporting treatments for kidney failure. Kidney replacement therapy except kidney transplantation replaces nonendocrine kidney functions in patients with kidney failure. Researchers have noted that dialysis, which is one of the most common KRT used, cannot compensate for all the tasks performed by a kidney, and thus the term 'Kidney support therapy' has been suggested to be a better name. Support of kidney function in modern times encompasses a wide array of methods and clinical scenarios, from the ambulatory patient to the critically ill. The ability to safely and routinely deliver ongoing organ support in the outpatient setting has, until recently, separated kidney replacement therapy from other organ support. Kidney replacement therapy (KRT) can be applied intermittently or continuously using extracorporeal (hemodialysis) or Para corporeal (peritoneal dialysis) methods. All modalities exchange solute and remove fluid from the blood, using dialysis and filtration across permeable membranes. Nearly 4 million people in the world are living on kidney replacement therapy(KRT),and haemodialysis (HD) remains the commonest form of KRT, accounting for approximately 69% of all KRT and 89% of all dialysis. Continuous therapy although costly is used mainly for hemodynamically unstable patients; benefits over intermittent therapy are improved tolerability as a result of slower removal of solute and water. Kidney transplantation is the ultimate step for end stage kidney failure management, as it replaces native kidney function completely. The main disadvantages of KRT relate to: Catheter related complications – blood loss, disconnection, infection or failure of access, mechanical complications of the extracorporeal circuit, fluctuations in the salt-water balance, activation of the coagulation cascade. Specific complications of peritoneal dialysis include: peritonitis, catheter- associated infections, hyperglycemia, protein loss etc. Current trends in artificial kidney research are ongoing with the lofty goal of a small device, preferably implanted with little or no maintenance required by the wearer that would deliver safe and highly effective renal replacement therapy including metabolic and endocrine functions.

Keywords: Kidney replacement therapy, kidney transplantation, haemodialysis

Date of received: 10.04.2023

Date of acceptance: 05.05.2023

DOI: <https://doi.org/10.3329/bjm.v34i20.66100>

Citation: Roy DK. Kidney replacement therapy: Pros and Cons. *Bangladesh J Medicine* 2023; Vol. 34, No. 2(1) Suppl. 181.