

Renal Transplant Unit, National Institute of Solid Organ and Tissue Transplantation, Dow University of Health Sciences, Karachi, Pakistan: On a Road to Minimize ESRD Burden

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End Stage Renal Disease (ESRD) is clinically defined as the progressive and irrevocable impairment of kidneys to perform life-sustaining functions and represents the final stage of Chronic Kidney Disease (CKD).¹ With bulging morbidity and mortality and rampant rise in economic burden globally, ESRD is now recognized as a major public health issue.²⁻⁵ Certainly, it goes without saying that coming decades will observe a high prevalence of ESRD, and chronic non-communicable diseases such as hypertension and diabetes mellitus, with accumulating aging population as the driving force.^{6,7} This prognosticated upsurge in ESRD pool has been gauged to occur mainly in the developing countries.⁸

Pakistan currently encountered 100 new cases of ESRD per million population.⁹ Apart from strategies to mitigate the incidence of ESRD, a state of equilibrium must be maintained between existing ESRD cases and renal treatment modalities. The importance of renal replacement therapy as the best

means of patient survival have led the government and private sectors to offer infrastructure for dialysis and transplantation, with 180 dialysis facilities and 30 transplant units operating across Pakistan.^{10,11} However the dearth of appropriate facilities and high costs deprives majority of the population suffering from ESRD of renal replacement therapy.¹² Under such circumstances of deteriorating health and economic indicators, healthcare sector requires a firm stand in renal medicine that could devise unprecedented approach to prevent and treat ESRD.

The contemplation and vision of the Renal Transplant Unit, National Institute of Solid Organ and Tissue Transplantation at Dow University of Health Sciences, Ojha Campus successfully materialized on 1st March, 2017. It is a privilege for this unit to be recognized as the second largest transplant unit in public sector of Sindh province. A manifesto was formulated with the guiding principle of overcoming the spiraling burden of ESRD. Against this challenging picture, the aim of the Renal Transplant Unit is to provide highly advanced transplantation services. This unit has successfully performed renal transplants of over 250 patients, a milestone achieved in a brief duration of three and a half years. Ever since its inception, the Renal Transplant Unit has persistently pursued excellence in efficient delivery of renal transplant services.

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Here, we would draw the opportunity to extend our deepest gratitude to the indefatigable drive of our renal healthcare team with zero compromise policy on the quality of care of renal donor and renal recipient dyad.

Non-adherence to medication has been the deciding factor for candidate's eligibility for organ transplantation. Besides transplantation cost, long-standing expenses incurred by patients related to immunosuppressive drugs may contribute to poor compliance to medication, transplant rejection and ultimate death. Optimum and desirable renal transplant results could only be achieved by providing financial assistance for buying the costly immunosuppressive drugs to the recipients.¹³ However, our Renal Transplant Unit is presently functioning as a self-funded body. Costs starting from pre-transplant consultancy, renal transplant therapy till post-transplant immunosuppressive medicines are endured by the patients. With that being said, we have embraced a cost-effective strategy, where patients with financial hardships are supported, wherever possible, through Dow Zakat Fund.

With renal transplant modality embracing scientific research as the mainspring of renal transplant decision making and practice, we aim to conduct research in renal transplant medicine, so as to be at par with international scientific community. The institution aims to create research impact through deeper understanding of renal transplant pathology especially renal transplant rejection. With emerging limitations in renal transplant such as immunologic rejections¹⁴, we seek to work along several renal research projects which includes, but are not limited to, non-invasive and molecular biomarkers of transplant rejection, HLA antibody and chronic transplant rejection.¹⁵ We strongly believe in multidisciplinary research and a handful of research projects are currently in the pipeline. Given the early phase of our Renal Transplant Unit, we also plan to

share a growth curve of our transplantation services in years to follow. Indeed, our research plan, once accomplished, would help us in building and disseminating an enormous clinical research data. This is strongly in alignment with the core vision of Dow University of Health Sciences; a research-driven tertiary healthcare organization.

With this backdrop, we are optimistic that this Renal Transplant Unit will fulfill the growing clinical need for a high-end and patient-focused solution to curb ESRD burden in Pakistan. Population with resource-constrained settings and disadvantaged from renal transplant therapy would be able to benefit from our initiative. Our manifesto befits and, indeed, complements the vision of other renal transplant centers across Pakistan and we aim to upscale and take this effort forward.

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