

Diagnostic and Interventional Nephrology

Interventional Nephrology is a new and emerging subspecialty of Nephrology that deals with ultrasonography of kidneys and ultrasound-guided renal biopsy, insertion of peritoneal dialysis catheters, tunneled dialysis catheters as a vascular access for sufferers undergoing hemodialysis as well as percutaneous endovascular strategies carried out to manipulate dysfunction of arteriovenous fistulas or grafts in end stage renal sickness patients.

Traditionally, these procedures have been delegated to a range of professionals with resultant delays in prognosis and initiation of therapy. To avoid the delays nephrologists have taken the initiative to operate these methods themselves. Indeed, current statistics have emphasised that nephrologists can safely and efficiently operate these techniques with excellent results.

The success of nephrologist's role in Interventional Nephrology insures the ideal management of renal sufferers with effectiveness, protection and decrease value for Public Health System. Certainly nephrologists must have adequate training and increase the crucial abilities in the new fields as a prerequisite for the success of the concept.

Nephrology as a clinical specialty has the special capability to supply the possibility of lifestyles to its sufferers even though their kidneys are entirely damaged. Indeed, end stage renal sickness (ESRD) sufferers can live by means of potential of renal replacement remedy (RRT), the quality of this life is not without problems, due mainly to cardiovascular and bone disorders. Technological progress and optimal performance of RRT (Hemodialysis and Peritoneal Dialysis) as well as renal transplantation already provide new views and essential improvement in this area of medicine.

Interventional Nephrology (IN) is a new and emerging subspecialty of Nephrology that mainly offers with:

- 1) Ultrasonography of kidneys and ultrasound-guided renal biopsy.
- 2) Insertion of peritoneal dialysis catheters (PDC) in ESRD patients
- 3) Insertions of tunnelled dialysis catheters (TDC) as a vascular access for sufferers undergoing hemodialysis
- 4) percutaneous endovascular methods carried out to control dysfunction of arteriovenous fistulas or grafts in ESRD patients.

Traditionally, these procedures have been delegated to a range of experts with resultant delays in diagnosis and initiation of therapy. To avoid the delays nephrologists have taken the initiative to perform these techniques themselves. Because of their unique perspective on dialysis, these experts are ideally desirable to operate this activity. Indeed, latest statistics have emphasised that nephrologists can safely and effectively operate these techniques with great results.

The purpose of performing procedures by nephrologists is the effective and timeless anticipating of scientific issues affecting renal sufferers by physicians working closer to and understanding higher the situation, the character and the needs of these patients.

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The success of this purpose insures the ideal management of renal sufferers with effectiveness, security and lower cost for Public Health System. Certainly nephrologists should have adequate training and increase the fundamental abilities in the new fields as a prerequisite for the success of the concept.

Peritoneal Dialysis (PD) as a method of RRT has many necessary advantages; preservation of residual renal function, improved middle molecule clearance, improved fluid and blood pressure control, decreased incidence of left ventricular hypertrophy, much less probability of extreme cardiac arrhythmias and better quality of life. However, about 10% of ESRD sufferers eventually choose PD, even though initially 50% appeared to take delivery of the method. The decreased utilization of PD is broadly attributed to the delayed insertion of peritoneal catheter by surgeons. For this purpose the insertion of PD by nephrologists is essential.

The procedure can be done by 3 techniques; the surgical, the blind or modified Seldinger and the peritoneoscopic technique. The first one is carried out by the surgeons under general anesthesia whereas the last one is carried out frequently by nephrologists under local anesthesia the usage of a small peritoneoscope (2.2 mm). The peritoneoscopic technique is related with decrease incidence of problems and provides the unique possibility of direct visualization of stomach where the PD is placed.

In conclusion sufferers with kidney disorder and specially those undergoing RRT need frequent interventional procedures. Interventional Nephrology is an emerging subspecialty of nephrology which affords the possibility to nephrologists to undergo training in this area to develop the procedural skills to perform interventions to optimize the care of their patients. Nephrology training programs must take the initiative to promote the development of such training programs.