

Renal Pearls: Five Things Our Nephrologists Want You to Know

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- 1. New Dialysis Transitional Care Unit Aims to Reduce LOS for AKI** - Most studies of patients with Acute Kidney Injury (AKI) requiring dialysis show that length of stay (LOS) can increase by 4 - 7 days and that the cost is increased by \$10 - 15,000 as compared to similar patients without AKI. Within the next year we will be opening a Dialysis Transitional Care Unit which is designed to improve care delivery in several ways. It will act as an onboarding facility for new dialysis patients with the goal for rapid education and training on home therapies, and it will accept patients who have acute kidney injuries requiring dialysis to facilitate more expedient hospital discharge where appropriate. In addition to the Transitional Care Unit, we are in the planning stage of opening an Acute Care Clinic for patients with CKD or AKI to improve real-time access with the goal of providing timely renal care while decreasing LOS and emergency department utilization where appropriate.
- 2. Slow Chronic Kidney Disease with Better Diet and Exercise** - A number of studies on patients with CKD including one done by doctors James Wasserman, MD, and Ana Rossi, MD, at MMC have shown programs that increase physical activity can improve not only abilities to perform activities such as walking or ADLs but also sense of wellbeing and general and mental health.ⁱ

Led by Dr. Wasserman, Maine Nephrology Associates now offers an integrative medicine clinic that teaches patients about diet and exercise as a way to slow the progression of chronic kidney disease, as well as improve overall health. In addition, mind body medicine such as meditation, guided imagery, and hypnosis are used to relieve mental and physical stress, pain, and insomnia. Complementary physical treatments are employed such as acupuncture and acupressure to treat pain, stress and inflammation.

- 3. Transplantation Leads to Lower Mortality and Hospitalization Rates** - Compared to dialysis, kidney transplantation is associated with lower mortality and hospitalization rates, better quality of life and better chance of joining the work force. The cost of maintaining a person on dialysis is three times as much per year, as maintaining a healthy kidney transplant.

The Maine Transplant Program, as the sole transplant program in the state, performs about 50 kidney transplants per year and follows more than 600

kidney transplant recipients. The Program has higher transplant rates than national average (44.4/100 people per year for MTP versus 18/100 people per year nationally). After three years of waiting, 50 percent of our candidates are transplanted compared with 22.6 percent nationally. Patient and graft survival rates are comparable to national rates (>97 percent at one year).

Nearly one third of potential living kidney donors are incompatible with their intended recipients. Consequently, the Maine Transplant Program at MMC continues to boost “Kidney Paired Donation” to provide recipient candidates with incompatible donor’s access to transplantation through local or national “swaps”. Maine continues to be a regional leader in this regard in part due to the extraordinarily high number of altruistic donors in our community.

4. Improve Outcomes for People with Acute Glomerulonephritis with TPE -

Acute glomerulonephritis is often mediated by antibodies that target glomerular antigens (Goodpasture syndrome), activate neutrophils (ANCA-mediated diseases) or cause dysregulation of von Willebrand factor (TTP) or the complement system. The removal of such antibodies with therapeutic plasma exchange (TPE) has been shown to improve renal outcomes and mortality for these diseases. Maine Medical Center’s Dialysis and Hemotherapeutics Unit serves as Maine’s sole resource for emergent access to TPE.

5. Personalize Nephrolithiasis Treatment with Lifestyle and Dietary Changes -

Eric Taylor, MD, leads the Maine Nephrology Associates Kidney Stone Prevention Clinic, a multidisciplinary program that formulates individualized urinary stone disease (USD) prevention and treatment plans. The lifetime prevalence of symptomatic USD in the United States has increased steadily over the last 30 years and is now 16 percent in men and 7 percent in women. In addition to pain and suffering, USD or its treatment may lead to impaired renal function, hypertension and other diseases. USD can be stopped with lifestyle and dietary changes and, when necessary, with medicines to treat an underlying condition that might be contributing to kidney stone formation. Effective USD prevention strategies depend on evaluation of stone type, when known, and a metabolic work-up that includes at least one 24-hour urine collection.

ⁱ Ana P. Rossi, Debra D. Burris, Leslie Lucas, Gail A. Crocker, and James C. Wasserman, Effects of a Renal Rehabilitation Exercise Program in Patients with CKD: A Randomized, Controlled Trial, Clin J Am Soc Nephrol 9: 2052-2058, December, 2014