

Serum creatinine trajectories to end-stage renal disease: The path to ESRD - The syndrome of rapid onset end-stage renal disease - A 100 consecutive cohort analysis in a Mayo Clinic dialysis population

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Background: The classic view of CKD-ESRD progression is a predictable, linear, progressive and time-dependent relentless declining renal function in CKD patients, with predictably increasing serum creatinine values, leading inexorably to ESRD and need for RRT. The syndrome of rapid onset end-stage renal disease (SORO-ESRD), which we first described in 2010, is irreversible ESRD rapidly following AKI superimposed on CKD. The contribution of SORO-ESRD to the ESRD population remains conjectural.

Objectives/Methods: We retrospectively analyzed the serum creatinine trajectories of 100 ESRD patients on RRT for ≥ 90 days.

Results: Excluding 9 patients with incomplete data, of 91 ESRD patients, 57M:34F, age range 39-93 years, 31 (34%) including two RTR satisfied the diagnosis of SOROESRD – 18M:13F, age 72 (50-92) years. AKI precipitating SORO-ESRD followed pneumonia (8), ADHF (7), pyelonephritis (4), post-operative (5), general sepsis (3), contrast-induced nephropathy (2), and others (2). Time between AKI and initiation of RRT was less than one week following cardiac surgery. Incidentally, 7 of 31 (23%) SORO-ESRD patients were concurrently on RAAS blockade.

Conclusions: SORO-ESRD is not uncommon among the incident US ESRD population. The implications of this phenomenon are huge with regards to ESRD care planning, AV Fistula first programs and overall CKD care in general and demand further study. If shown to be this prevalent in multi-center studies, major paradigm shifts must be warranted in the way we practice nephrology. We have organized a Worldwide SORO-ESRD Consortium of Nephrologists to study this phenomenon in the Americas, Asia, Africa and Europe.

Biography

Dr. Onuigbo received his MD at age 23 from the University of Nigeria. US Board-Certified Internal Medicine and Nephrology. Nephrologist/Transplant Physician/Hypertension Specialist, Mayo Clinic Health System, Eau Claire, WI, USA. Associate Professor, Mayo Clinic, Rochester, MN, USA. Fellow of the American Society of Nephrology. Regional Director, North-Eastern Region, Mayo Health System Practice-Based Research Network 2009-2011. Recipient 2010-2011 Mayo MacMillan Scholarship Award. Over 80 publications including editing a major Hemodialysis textbook in 2012. Described the new syndrome of late-onset renal failure from angiotensin blockade (LORFFAB-2005) and the new syndrome of rapid-onset end-stage renal disease (SORO-ESRD-2010). Completed an MBA (Healthcare) in May 2012.

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