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TIMING AND APPROPRIATE TYPE OF DIALYSIS VASCULAR ACCESS CREATION REMAINS A MYSTERY

Robin Shah, Nabil Haddad, Khaled Boobes, Sharon Van Cleef, **Anil Agarwal**
Department of Internal Medicine, Nephrology, Ohio State University Wexner Medical Center, United States

Objectives:

Guidelines recommend timely pre-dialysis access creation, preferably at least 6 months prior to anticipated hemodialysis (HD) initiation to reduce incident catheter utilization. Predicting the decline in kidney function and timing of access creation in CKD remains a challenge. Our program utilizes a HD access coordinator to facilitate access creation with nephrologists and surgeons. This study analyzes whether this system improves timeliness, minimizes unnecessary vascular access procedures or reduces incident catheter use.

Methods:

Prospectively collected data from an electronic access database and the medical records of patients from a single hospital system undergoing pre-HD access creation from 2011-2017 were analyzed.

Results:

130 patients (age 22 to 89 years) had 146 accesses (131 AVF and 15 AVG) creations. Seventy-eight (60%) were male and 52% were Caucasian. Median age was 60.5 and 56.5 years and median eGFR was 13.5 and 15.5 ml/min per 1.73 m² in the AVF and AVG group, respectively. Seventy six patients started HD with a median time after access creation of 109 and 131 days for non-diabetics and diabetics, respectively. Currently, 54 (42%) patients remain pre-HD, 18 (33%) have a failed access and 6 (11%) died with a functioning access. HD was initiated with catheter in 36% (females 46%, males 30%).

Conclusions:

Contrary to the guidelines, our patients had access creation only 3.5-.4.5 months prior to dialysis initiation. Despite that, the incident catheter use was less than the national data and nearly half of the patients are yet to use their access and a significant number died with a functioning unused dialysis access. Our data emphasizes the need to better understand and develop models for dialysis predictability and life expectancy in order to appropriately determine the type and timing of access creation to minimize unnecessary cost and procedures. Additionally, our study demonstrates the importance of vascular access placement coordination.