Global Action. Local Change.

KDIGO Controversies Conference on Dialysis Initiation, Modality Choice and Prescription

- Breakout Group Questions -

Group 1: Choice of Initial Dialysis Modality

1. Is there a preferred modality and location (e.g., in-center, self-care, home-based therapy) for dialysis initiation? What is the optimal frequency? How can patient choices/preferences/medical comorbidities/socioeconomic factors/health literacy be integrated in this decision? Given potential constraints in local reimbursement policies, jurisdictions and infrastructure, what other medical/social factors does one need to consider in modality selection? Choice of modality includes:
    a. Incremental start (HD or PD)
    b. Conventional (thrice weekly HD or PD)
    c. PD first (including CAPD vs APD)
    d. Integrated HD/PD
    e. Frequent / nocturnal / intensive HD, in-center or at home,
    f. Hemodiafiltration (HDF) or
    g. Palliative dialysis

2. What are the current barriers that prevent patients from choosing home-based therapies (PD or HD)?

3. Given the theoretical construct of various aforementioned modalities, how does one reconcile the current clinical epidemiology of dialysis initiation worldwide?

4. Should specific patient-related factors or co-morbid conditions require specific treatment strategies? (e.g., age, body size, current residual kidney

function (RKF), polycystic kidney disease, heart failure, atherosclerotic heart disease, diabetes and anuric patients, morbid obese patients, pediatrics and pregnancy?) How do we take into account the impact of vascular access on dialysis modality decisions (ie. In situations with poor likelihood of vascular access success)? Should potential plan for kidney transplant, eg. availability of potential live donor influence choice of dialysis modalities?

5. Should preservation of RKF be one of the considerations in deciding the choice of dialysis modality?

6. What are the strategies for urgent vs planned start (HD vs PD)? How can we ensure that patients with acute/unplanned start are given the opportunity and education to choose dialysis modality?

7. How can we better define optimal patient support:
    a. To help them to choose the modality that best suits their particular circumstances and needs?
    b. Role of remote home monitoring for supporting and/or maintaining patients at home with PD or home HD?

8. What are the drivers for dialysis initiation across jurisdictions?
    a. What is the economic implication of each potential strategy?
    b. What are the infrastructure implications of each potential strategy?
    c. What are some strategies in reducing early mortality (i.e., first 90 days) after dialysis initiation?
    d. What are the causes of early PD attrition and means for its reduction?

Group 2: Timing and Preparation For Dialysis Initiation

1. What are the current recommendations and status across different jurisdictions on this issue?
    a. Review of current guidelines and recommendations
    b. Review of current registry data and trends

2. What are the definitions on:
    a. Timely vs late referral
    b. Avoidable vs unavoidable delay in referral

3. What is the impact of dialysis initiation on dialysis outcomes? What is the effect of the reason for initiating dialysis (e.g., acute deterioration in CKD precipitating dialysis)?

4. How can late referral be avoided?

5. In patients with ESKD requiring initiation of dialysis, how can timing and preparation be optimized?
    a. Can we predict when to start dialysis?
        i. Serial assessment of patient-reported outcomes (e.g., PROs: physical functioning, frailty, cognitive impairment) & clinician-reported outcomes (e.g., ClinROs: signs and symptoms) and their trajectory: What are the available tools? What is the ideal timing of assessment? How do symptoms change with initiation of kidney replacement therapy?
        ii. Traditional biochemical markers and their trajectory: Can biomarkers predict when to initiate dialysis? How would acute deterioration in kidney function impact on the interpretation of biomarker levels and their trajectory?
        iii. Novel biomarkers
        iv. When predicting the time to start dialysis, how is that affected by the decision to use incremental dialysis or a trial of dialysis? Can we advise about the timing of dialysis access creation in order to avoid patients starting dialysis without a relevant functioning access in place?

        Address definition, utility & validation for each above and the relationship of each with respect to long-term outcomes including quality of life, hospitalizations, complications, withdrawal of dialysis
    b. Can we define the nature and timing of preparation and education, including counseling and peer support?
    c. How can we tailor (a) and (b) above for vulnerable patient subgroups:
        i. return from transplant/prior dialysis
        ii. pediatric
        iii. elderly
        iv. patients with comorbidities (e.g., diabetes, obesity, etc.)
        v. pregnancy

    d. What are specific/appropriate co-interventions we need to consider?
        i. The need for optimizing co-morbid conditions
        ii. The need for social support
        iii. The need for financial support
        iv. The role of nutritional support

Group 3: Dialysis Access and Preparation

Although it is widely accepted that pre-emptive dialysis access is preferred, there are significant challenges and barriers to achieve timely establishment of dialysis access. When preparing for HD or PD:

1. What are the system/patient/care providers' role and barriers in choosing dialysis access?

2. Is there a need to rethink old paradigms for dialysis access and consider dialysis access in the framework of the patients ESKD Life-Plan?

3. When should CVC/graft/fistula/PD catheter be considered as the initial access for medium to long-term dialysis?

4. What are the exit strategies for the initial access chosen and the considerations for subsequent dialysis access?

5. How do we reconcile the type of dialysis access between patients' choices versus clinical evidence?

6. Is there a role for access education, coordination and maintenance?

7. What are the existing gaps in clinical care and research in dialysis access, such as timing and monitoring of access prior to use? What about novel approaches to vascular access and peritoneal access?

Group 4: Optimal Dialysis Adequacy and Symptom Control

1. What is the definition of "adequacy"? Do care providers and patients have the same definition of adequacy?

2. Once agreed upon the definition: which variables can/should be used?
    a. Biochemical indices
    b. Volume status
    c. Signs and symptom control
    d. Nutritional status
    e. Novel physiological indices (e.g., avoidance of subclinical hemodynamic alterations)

f. Convection volume (in case of hemodiafiltration)
g. patient perspectives

3. What is the role of small / middle / large molecule kinetics in dialysis "dosing"?

4. Should we be measuring non-traditional uremic retention solutes? If so, how is this best achieved?
    a. What are the important uremic toxins?
    b. Can measurement be incorporated into routine clinical care?
    c. Is there sufficient evidence of clinical importance to justify their routine measurement?

5. How do we prioritize and balance the importance of:
    a. Solute clearance
    b. Fluid removal/rate
    c. Reducing treatment burden and interference with life activities
    d. Patient signs and symptom control (e.g., fatigue, pruritus, restless legs, etc.)

6. Should alternate day hemodialysis be adopted as the norm to avoid long inter-dialytic intervals? If so, how can this be operationalized?

7. What are the appropriate quality metrics (e.g., SONG-HD) and measurement tools?
    a. How should symptoms be assessed and with what instruments)?
    b. How should multiple measures be incorporated into a quality metric to allow for a multidimensional approach to assessing quality?
    c. How can metrics be individualized to avoid a "one-size-fits-all" approach?

8. What is the role of additional supportive/monitoring care in dialysis patients with significant frailty?