



## **KDIGO Controversies Conference on ADPKD Breakout Session Questions**

### **Diagnosis**

#### **Prioritized:**

- 1. How and when should ultrasound, CT (contrast enhanced) or MRI be used to diagnose ADPKD? Are the current US-based criteria for diagnosis and disease exclusion appropriate? Specific evaluation of ADPKD living related donor?**
- 2. What are the current indications and approach for genetic testing in ADPKD? Can we use the genetic information for prognostic discussion? Specific evaluation of ADPKD living related donor?**
- 3. What is the future role of molecular genetic diagnostics in ADPKD?**
- 4. Should PGD be available/used for ADPKD? What are the ethical, safety and cost issues?**
- 5. When to perform genetic testing and what is the role of exome re-sequencing for diagnosis of PKD in childhood?**

## **Management of Renal Manifestations**

### **Prioritized:**

- 1. Should we continue to use kidney volumes (total or specific volumes) to measure disease progression in clinical trials for ADPKD? Which modality should be used (MRI, CT, ultrasound)? Should kidney volumes be used to ascertain prognosis and monitor disease progression in clinical practice? How?**
- 2. Should we quantify proteinuria systematically in ADPKD? When do we go for further exploration? Do we use a specific anti-proteinuric drug or sequence?**
- 3. What is the appropriate stepwise approach to manage chronic kidney pain and the role of denervation in the management of severe, chronic pain?**
- 4. How should the progress of ADPKD pregnancies be monitored in the mother and the fetus?**
- 5. How should QOL be measured in clinical trials and clinical practice? Should we develop specific questionnaires?**

### **Optional:**

- 6. What is the role of novel imaging based techniques in the evaluation and management of the renal complications of ADPKD (DECT, DWMRI, 18FDOG PET, TAE, etc.)?**
- 7. Should tranexamic acid be used to treat renal hemorrhagic complications of ADPKD? If so when?**

## **Management of Hypertension & Renal Function Decline**

### **Prioritized:**

- 1. Should high blood pressure be detected and treated earlier in ADPKD? How? How should BP be evaluated and managed in children?**
- 2. How should GFR be measured in clinical trials? On the basis of the available RCTs, which type of patients should be recruited in large trials?**
- 3. Are guidelines for management of HT in CKD (JNC8, KDOQI, KDIGO, etc) valid for ADPKD? When to treat adults - BP > 140/90 or 130/80?**
- 4. Should RAAS blockade be the first line treatment? Are ACEI and ARB equivalent?**
- 5. Dietary recommendations: What are appropriate recommendations for water and salt intake? Should they be monitored? What is the evidence for limiting or avoiding caffeine? To what extent?**

### **Optional:**

6. Glomerular hyperfiltration in ADPKD, does it exist? If so what is its significance and should it be treated?
7. Would standardized MR-RBF measurements be useful to predict and monitor disease progression in ADPKD? If not, why?
8. What are the barriers to clinical trials for ADPKD? What is the role of emergent therapies (V2 receptor antagonists, somatostatin analogs, rapalogs, others)? What opportunities/priorities for combination therapies? What are the barriers to clinical trials of not-patent protected drugs?
9. Is there evidence for a beneficial effect of statins or other treatments for hyperlipidemia in ADPKD adults?
10. Should asymptomatic hyperuricemia be treated in ADPKD?
11. Are there specific reasons to favor beta or alpha-beta blockers, alpha2 adrenergic agonists, calcium channel blockers in ADPKD as second line treatment? When are diuretics indicated? Is there evidence for mineralocorticoid receptor blockade, e.g. spironolactone?

## **Management of ESRD in ADPKD**

### **Prioritized:**

- 1. What is the optimal choice of dialysis modality? What are ADPKD specific issues associated with hemodialysis or peritoneal dialysis?**
- 2. What post-transplant complications occur more frequent in ADPKD than in non-PKD patients? What evaluations should ADPKD transplant candidates undergo to minimize the risk?**
- 3. How should native kidneys be monitored after initiation of dialysis or after renal transplantation? Is there an increased risk of kidney cancer?**
- 4. What are the optimal hemoglobin, blood pressure and lipid targets in ADPKD patients on dialysis?**
- 5. Can ADPKD kidneys be used as donor organs under specific circumstances?**

### **Optional:**

6. How should anticoagulation be managed in ADPKD patients on hemodialysis (increased risk for bleeding in the kidney or elsewhere)?
7. What is the optimal timing of preemptive renal transplantation in ADPKD?
8. Should native nephrectomy be done and at what point related to transplantation: pre, concurrent, or post transplant?
9. What immunosuppressive therapies should be utilized in a transplanted ADPKD patient? Should hepatic cystic disease impact on choice of immunosuppression?
10. What are the indications for combined kidney-liver transplantation?

## **Management of Extra-Renal Complications**

### **Prioritized:**

- 1. Is widespread screening for intracranial aneurysm of all patients with ADPKD justified? If not, in which patients should screening be recommended? If screening is negative, should patients be rescreened? At which time interval?**
- 2. When an UIA is detected, what are the indications to intervene? If an UIA is recommended for conservative management, what are the recommendations for follow-up and to reduce the risk of rupture?**
- 3. What are the indications for intervention in PLD? How to choose the most appropriate treatment? Implications for contraception?**
- 4. How to diagnose and treat liver cyst infections?**
- 5. What other extrarenal complications of ADPKD are clinically significant? When should they be suspected clinically? Should we manage them specifically?**

### **Optional:**

- 6. Is there a “vascular” phenotype in ADPKD and if so how do we define it? Are aneurysms in other vessels, specifically the thoracic or abdominal aorta associated with PKD? Should individuals with ADPKD and a family history of aortic aneurysms be screened for this, if so how?**
- 7. How to evaluate and follow PLD: Need to develop a clinical score or a specific questionnaire? Should volume growth rate be followed by CT or MRI?**
- 8. What are the barriers to clinical trials for PLD? What is the role of emergent therapies (somatostatin analogs, rapalogs, others)?**

## **Practical Integrated Patient Support**

- 1. What should a doctor tell or give to a patient at first diagnosis? What reactions should the doctor be prepared for? Would checklists be helpful? Should the PKD patient be classified differently from the current CKD classification by eGFR stage?**
- 2. What are all the issues related to family planning decisions? Consider ethical, moral, legal, financial, and religious perspectives. Include pregnancy: enlarging uterus, BP control and obstetric considerations during term.**
- 3. Where can patients go for factual, unbiased support?**
- 4. What lifestyle modifications should be recommended to most or all PKD patients (e.g., fluid, pain, fullness/acid reflux, nutrition, vitamins, exercise, etc)? How can a patient tell if they are effective (for encouragement)? Why don't all patients follow lifestyle guidance and what can be done to raise adherence to a beneficial lifestyle?**
- 5. What is the best treatment plan (in all stages) for pain management?**
- 6. How will favorite hobbies or sports be impacted by having PKD and its progression? What should be recommended?**
- 7. How and when do I talk to my children about PKD? When should they be tested? What do I tell them to do lifestyle-wise? What are the impacts to adolescent quality of life? When do you discuss PKD, even with unaffected family members? Should a kidney growth chart for pediatrics be created? Caution is advised in handling the screening of children <18 which in some countries is not advised if not illegal.**
- 8. What are the possible PKD financial impacts (career progress, potentially reduced income, life and health insurance, long-term care, etc)? Are these barriers to diagnosis and early treatment?**
- 9. Do we need to provide doctors with psychological guidelines for PKD patients (e.g., body image, energy level, sexual side-effects, giving up favorite foods, etc)?**
- 10. What is the benefit to a patient of going to a recognized "PKD Center" instead of a regular nephrologist?**
- 11. Should a set of PKD PROMs (Patient-Reported Outcome Measures) be established?**

- 12. What should patients be told about PLD? Is enough known about potential lifestyle modifications (good and bad) to affect this frightening PKD-related condition? What advice can be given to pre- and post-menopausal women with PLD regarding contraception and estrogen replacement therapies?**
- 13. What practical advice and psychological support should be given to patients regarding aneurysm screening and follow-up?**
- 14. What should patients be told about the presence of cysts in organs other than the kidneys and liver? What advice should patients be given about the need or otherwise for investigations of these cysts to reassure or allay fears of their effects?**