Obesity in patients with CKD 2-5, Kidney Tx and on Dialysis Recommendations from the Pediatric Renal Nutrition Taskforce



Obesity & Metabolic Syndrome (O&MS) Prevalence: 15-30% CKD > 3.8-9.8% children



Lack of guidelines to prevent and manage obesity and MS in CKD







METHODS



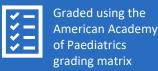
Literature search (1980 -2020)

PICO: Population, Intervention, Comparator, Outcome

2-18 years, CKD2-5, Dialysis, KT

Age- & Sex- matched children, adults with CKD, no comparator





Diagnostic Criteria



2-5 yrs

Weight-for- Height for age > +2SD

BMI>+1SD 19 yrs= BMI >25

Weight-for-Height for age > +3SD

BMI > +2SD 19vrs-BMI > 30

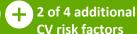
(WHO growth reference chart or a country-specific growth chart)

METABOLIC SYNDROME





Overweight (or obesity) +





SBP/ or DBP(BP) ≥ 90th centile for age, sex and height or ≥ 130/80 mmHg, whichever is lower, or on anti-hypertensive medication



Fasting triglycerides ≥ 100 mg/dL (1.1 mmol/L) if age < 10 years, or ≥ 130 mg/dL (1.5 mmol/L) if age ≥ 10 years



Fasting high-density lipoprotein (HDL) < 40 mg/dL (1.03 mmol/L)



Fasting serum glucose ≥ 100 mg/dL (5.6 mmol/L) or known type 2 diabetes mellitus (T2DM)

MANAGEMENT

Comprehensive Multicomponent Intervention Goal: improve components of the MS

INDIVIDUALIZED **ENERGY INTAKE**



Diet quality

Fruits & vegetables. whole grains, low- or non-fat dairy, pulses, fish & lean meat

sugary beverages, processed foods, foods rich in saturated fat

Tube fed

Review & adjust calories in the formula to avoid development of under/ overweight

DAILY PHYSICAL ACTIVITY



with intensity and duration individualized according to age, physical tolerance, CKD stage. & comorbidities



BEHAVIOURAL MODIFICATIONS

regular & adequate sleep, reduction of screen time & managing psychosocial stressors

Counselling or psychological support

MEDICATIONS



Anti-obesity drugs not recommended No routine use of statins or lipid lowering drugs

BARIATRIC SURGERY



BMI ≥ 40 or BMI ≥ 35 kg/m2 & specific obesity-related comorbidities (T2DM, severe steatohepatitis, pseudotumor cerebri. & moderate-to-severe obstructive sleep apnea)



avoid excessive **SODIUM** intake further reduce dietary

sodium intake in those with hypertension

VA by @DrMalinaM

Reference: Assessment and management of obesity and metabolic syndrome in children with CKD stages 2–5 on dialysis and after kidney transplantation—clinical practice recommendations from the Pediatric Renal Nutrition Taskforce Stabouli S, et al. PedNeph, v.37,p 1-20 (2022)