PROTEINURIA REFERRAL GUIDELINE

MAINE MEDICAL PARTNERS - PEDIATRIC SPECIALTY CARE (DIV. OF NEPHROLOGY) • 887 CONGRESS ST, PORTLAND, ME • (207) 662-5522

HIGH RISK

SUGGESTED EMERGENT CONSULTATION

SYMPTOMS AND LABS

Proteinuria in patients with symptoms of severe renal disorders (nephritis, RAS, nephrotic syndrome, tubular disorder, CKD):

Symptoms of Glomerular proteinuria (losses of large proteins at the GBM): edema, ascites, hypertension, gross hematuria, pneumonia/sinusitis, malar rash, purpura, arthritis, short stature

Symptoms of Tubular proteinuria (small proteins from failure to reabsorb in the proximal tubule): Failure to thrive, rickets, light

SUGGESTED PREVISIT WORKUP

Referral indicated, call pediatric nephrology to discuss

Glomerular proteinuria:

Urinalysis and microscopy

Random urine protein + random urine creatinine

C3, C4, ANA with Ds-DNA reflex, streptozyme, throat culture, CMP and CBC

Tubular proteinuria:

Urine protein electropheresis

Urinalysis and microscopy (patient may have euglycemic glucosuria)

CMP, CBC, iPTH, Phosphorus, carnitine

MODERATE RISK

SUGGESTED CONSULTATION OR CO-MANAGEMENT

SYMPTOMS AND LABS

Proteinuria found in patients who have had urine screening due to the following symptoms:
Dysuria, urinary urgency, urine frequency, urine incontinence, suprapubic tenderness and/or gross hematuria with any of the above symptoms

On Exam: NO edema or ascites, normotensive. May have suprapubic area tenderness or belly pain

SUGGESTED WORKUP

Urinalysis and microscopy

Urine culture

If proteinuria is found in the setting of UTI, confirm proteinuria has cleared with resolution of infection

If culture NOT consistent with UTI, first morning random urine protein and random urine creatinine

If urine protein/urine creatinine is ‹ or = 0.2, no referral needed

If › 0.2 consider referral, CMP, CBC and renal ultrasound

LOW RISK

SUGGESTED ROUTINE CARE

SYMPTOMS AND LABS

Interpreting proteinuria in the patient who warrants yearly/routine asymptomatic screening:

Urine screening for patients with a solitary kidney, VUR, hydronephrosis, recurrent UTI/UTIs, family history of CKD/Alports/PKD with no current symptoms

Normotensive, no edema, normal growth

SUGGESTED MANAGEMENT

For asymptomatic, isolated proteinuria perform first morning random urine protein and random urine creatinine, if this shows urine protein/urine creatinine that is ‹ or = 0.2, referral is unnecessary

If patient has hypertension OR protein/creatinine that is › 0.2 consider referral to pediatric nephrology

CLINICAL PEARLS

- Proteinuria as diagnosed by random urine dipstick may fall into the normal range if the specimen has high SG.
- CLARIFY HOW to do first morning urine with families. Bladder needs to be fully emptied before sleep, collect urine as soon as the patient gets up from bed.
- First morning random urine protein and random urine creatinine are more helpful to obtain than full 24 hour urine sample.
- Some forms of nephritis can have pyuria (MPGN, post infectious nephropathy). Urine culture should be obtained if UTI is suspected and nephrology should be consulted if there is persistent proteinuria with pyuria and urine culture is negative.
- Prevalence of proteinuria in single urine specimen in children varies (5-15%), transient proteinuria or orthostatic proteinuria are not indicative of renal disorder.
- Any cause of kidney disease (not just nephritis/nephrotic syndrome) can lead to proteinuria, including PKD, UTI scar, renal artery stenosis, ATN, AIN, renal hypoplasia, renal insufficiency.

Maine Medical PARTNERS

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