

Renal Biopsy: Clinico- pathologic Correlations

(or mini-CPC)

Renal Week 2010
Annual ASN Meeting
Denver, CO
November 20, 2010

Kline Bolton, MD, FASN
Clinician, case discussant

Nickeleit Rules for Bolton

- Be **BRIEF**. One to two (that's 1-2) minutes for case discussion
- One to two (that's 1-2) slides per case
- No clinician has **ever** gotten all the cases right
- I would not think of changing that tradition
- He didn't mention what the most number of misses was over the years...
- Don't worry if there is no urine sediment report or missing data. "Likely it wasn't important....."

CASE #1 Clinical

- 45 yo AAM
- Edema, ↓ GFR, creatinine 3.2 mg/dl at presentation (12/06)→4.2 mg/dl (2/07)
- DM (? Type 1) 15 y with retinopathy, HTN (very high at times)
- Anemia, proteinuria (? amount)
- ANA ⊕ 1:160
- ↑ ESR 104
- No urinalysis or US reported

Case #1 Differential Diagnosis

So is this chronic or acute or both, is there anything treatable?

- 1) DGS, 10-15% chance KW lesions with HTN nephrosclerosis
- 2) SLE
- 3) Crescentic, other RPGN

CASE #2 Clinical

- 53 yo WM CKD
- Hypertension with headache
- NSAIDS
- Proteinuria, hematuria
- + HCV Ab, negative cryo, neg serologies
- No viral load reported
- Biopsy (2004) MPGN “not diagnostic for Type I”
- 2004 → 2008, creatinine 1.0 → 1.9 → 5.3 mg/dl
- Edema, rash on feet, UA with dysmorphic RBCs
- Arthralgias, nephrotic syndrome

Case #2 Differential Diagnosis

CKD, nephritic/nephrotic syndrome, dysmorphic RBCs, +HCV Ab

- 1) MPGN with hypertensive changes with chronic interstitial nephritis
- 2) FSGS with interstitial nephritis and hypertensive changes

CASE #3 Clinical

- 74 yo WF
- HTN, hypothyroid, cerebellar hemangioblastoma(2003)
- Hematuria 2/06, urol eval neg, including US
- 7/06 proteinuria, hematuria
- Edema, proteinuria, nephrotic syndrome 5.2 gm TUP, 1/07
- No RBC casts, ? dysmorphism
- Effect of synthroid not reported
- WBC in urine, ? Bacteria
- Neg serologies, C'
- UPEP, serum free light chains ?

Case #3 Differential Diagnosis

Elderly, nephrotic syndrome, hematuria

- 1) Membranous nephropathy
- 2) Minimal Change diseases
- 3) Amyloidosis/ light chain disease
- 4) Hypertensive nephrosclerosis superimposed
- 5) FSGS
- 6) Unlikely MPGN

CASE # 4 Clinical

- 59 yo WM, 2 wks fever, night sweats, weakness, and “dark” urine. Creatinine 2.84 mg/dl
- Naproxen for arthralgias
- Hemochromatosis
- Obesity
- Hematuria (21-50 RBC/HPF & pyuria - ? dysmorphism ? RBC casts. New from 4 months prior, 5.5 gm proteinuria (0.1 gm/L)
- Monoclonal IgM kappa
- ↓ C-3, C-4, ↑ ESR, normal serologies (? Strept)
- Large kidneys, ↑ echotexture
- 4 months prior, urine ⊕ protein, 1RBC, 5 WBCs, creatinine 0.9 mg/dl

Case # 4 Differential Diagnosis

Something for everyone, acute and chronic

- 1) PIGN
- 2) MPGN
- 3) Obesity related FSGS
- 4) Vasculitis/RPGN
- 5) Hemochromatosis diabetic nephropathy
- 6) Amyloidosis
- 7) Combination !!

Case #5 Clinical

- 46 yo M (?race)
- 24 y HIV, Rx
- Nephrotic syndrome 9.6 gm
- BP 170/110 mm Hg
- Creatinine 1.49 mg/dl
- Pyuria, no hematuria
- Uric acid 7.5 mg/dl
- Mild LFT abnormalities
- BK 4400 copies/ml
- ? Hepatitis i.e. Hep C
- Creatinine→2.25 mg/dl with dysmorphic RBCs
- ? Time Course- “During the clinical course...”

Case #5 Differential Diagnosis

HIV, nephrotic syndrome, new onset active UA

- FSGS
- IgA nephritis with glomerular sclerosis
- PIGN with FSGS
- MPGN
- HIVAN
- BK nephropathy