Nephrotic Syndrome Early Post Kidney Transplantation: Rare Manifestation of Acute Rejection

DR RITESH KAUNTIA

CONSULTANT NEPHROLOGIST AND TRANSPLANT PHYSICIAN

MANIPAL HOSPITAL, KOLKATA, INDIA

DISCLOSURES: NIL

CLINICAL DETAILS

- 38/M
- HTN GOUT

- CKD STAGE 5D
- DIALYSIS VINTAGE 2 YEARS
- BD-UNKNOWN

- RECIPIENT B+
- DONOR B+

- HLA TYPING 2/6 MATCH
- CDC-NEG FCM-NEG
- DSA CLASS 1 AND 2-NEG

- KT ON 26/11/21

- DONOR-LUR

- IND: GRAFALON 400MG

- IMMUNOSUPPRESSION:
- TAC+MMF+STEROID

- WARM IT- 3 MIN
- COLD IT- 25 MIN

- ANASTOMOSIS :
- ARTERY- 1 VEIN- 1

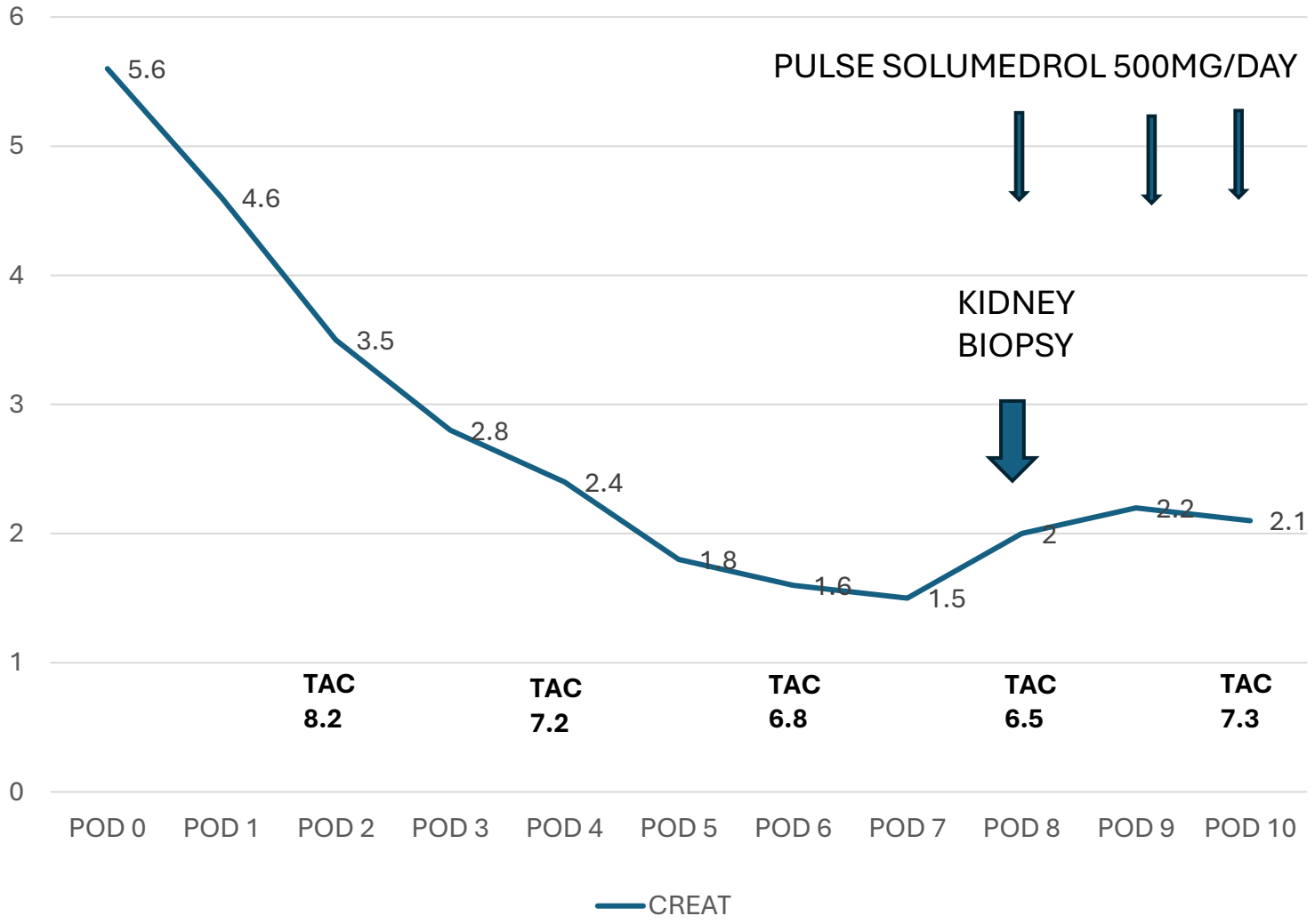
CLINICAL DETAILS AND COURSE

- GRADUAL DECLINE IN CREATININE TO 1.5MG/DL ON POD7
- RISE IN CREAT TO 2.0 MG/DL ON POD8

- OTHER INVESTIGATIONS:
- HB-10 TC-6200 PLT.C- 210000
- CA-9.4 UA-6.5 LDH-262
- T.BIL-0.8 D.BIL-0.1 SGOT-24 SGPT-30 ALB-2.4
- URINE PROT 2+, RBC-15-20, WBC-3-4
- TAC LEVEL-6.5
- USG DOPPLER- Normal flow pattern, Ascites+

- KIDNEY BIOPSY DONE

- RX WITH PULSE SOLUMEDROL 500MG X 3



ATYPICAL FEATURES

INCREASING PEDAL EDEMA

DEVELOPMENT OF ASCITES

PERSISTENT DRAIN

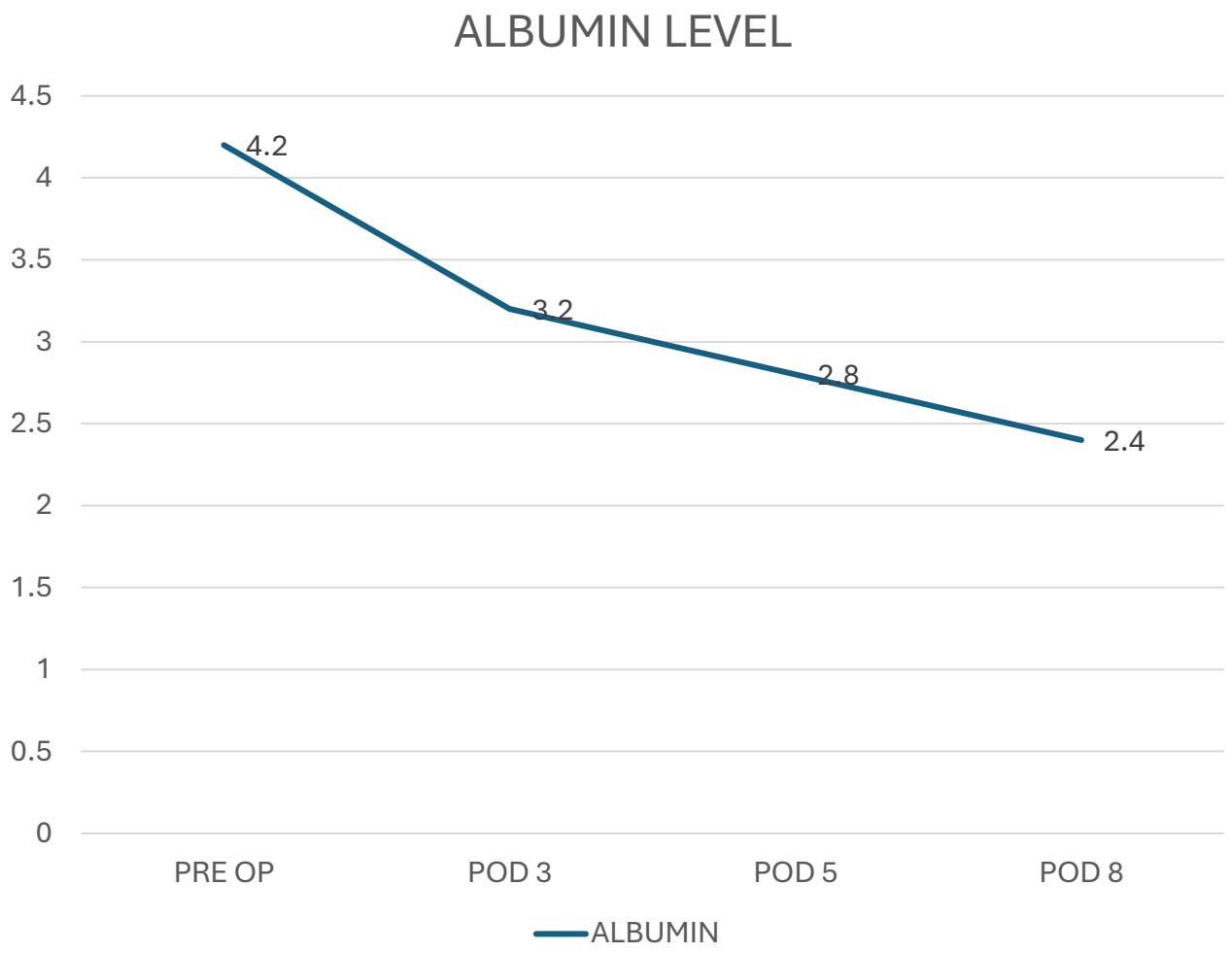
ON EVALUATION:

URINE R/M- PROT 2+, RBC WBC

URINE PCR SPOT-7.6 GM/GM

24 HOUR URINE PROTEIN 13 GM/DAY

DRAIN CREAT: 2



KIDNEY BIOPSY

9 glomeruli

Non proliferative

No glomerulitis/ mesangial expansion/ capillary wall duplication

No tuft necrosis/ intracapillary thrombi

IF- IgG, C1q, Kappa, Lambda mesangial granular staining

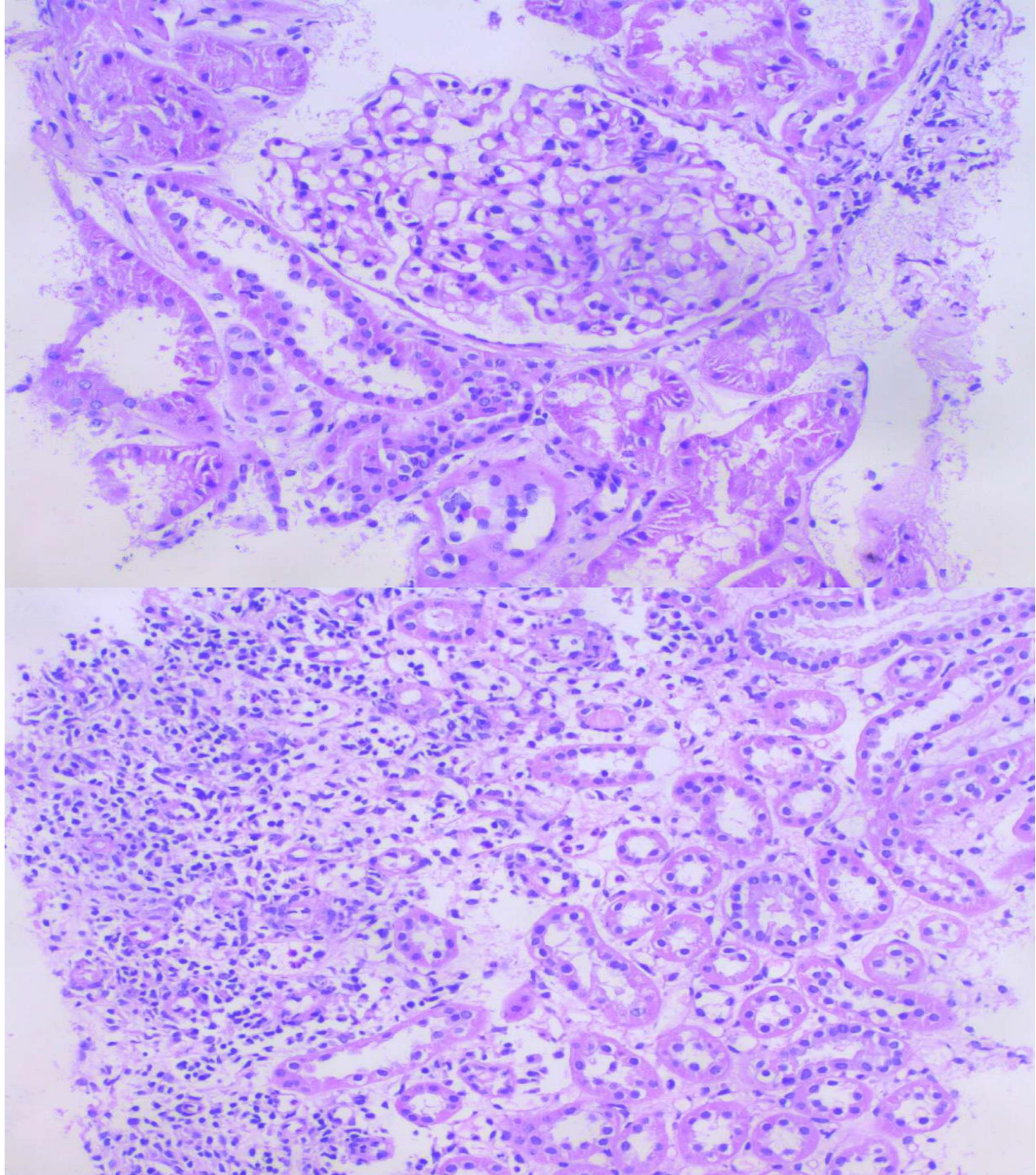
Tubular vacuolation with patchy ATN

Multifocal interstitial inflammation (i2, ti2) with moderate tubulitis (t2)

C4d- negative

SV40 stain-negative

No large arteries included



CLINICAL COURSE

- In view of features s/o nephrotic syndrome
- Possibility of FSGS considered - No past h/s/o nephrotic syndrome/ CGN
- 5 sessions of 1.5 volume PLEX done on alt day
- 500mg Rituximab given in view of persistent proteinuria
- Tac level maintained in range of 10-12
- Electron Microscopy: No evidence of any deposits. Focal effacement of foot processes seen.
- Patient gradually improved and over 2 weeks creatinine stabilized around 1.3mg/dl and features of fluid retention resolved

FOLLOW UP

- At 1 month follow up s.cr 1.3mg/dl, urine PCR 0.2
- At 1 year follow up s.cr 1.4mg/dl, urine PCR 0.1
- No recurrence of proteinuria on follow up 30 mths post KT

FINAL DIAGNOSIS:
PODOCYTOPATHY ASSOCIATED WITH ACUTE REJECTION

- **e/o CELLULAR REJECTION ON BIOPSY**
- **FSGS UNLIKELY- NO PAST HISTORY**
- **RESPONSE TO ANTI- REJECTION**
- **NO RECURRENCE ON FOLLOW UP**

Kidney International, Vol. 65 (2004), pp. 2360–2370

DIALYSIS – TRANSPLANTATION

Post-transplant nephrotic syndrome: A comprehensive clinicopathologic study

ULKEM YAKUPOGLU, ELZBIETA BARANOWSKA-DACA, DANIEL ROSEN, ROBERTO BARRIOS, WADI N. SUKI, and LUAN D. TRUONG

Departments of Pathology and Medicine, Renal Section, Baylor College of Medicine; and The Methodist Hospital, The Kidney Institute of Houston; and the Department of Pathology, M.D. Anderson Cancer Center, Houston, Texas

Table 1. Findings in 73 initial transplant biopsies in 74 patients with post-transplant nephrotic syndrome[a]

Chronic allograft nephropathy with		31
Nonspecific glomerular changes	13	
Chronic allograft glomerulopathy	5	
Chronic allograft glomerulopathy + acute glomerulitis	3	
Chronic allograft glomerulopathy + FSGS	4	
FSGS	6	
Recurrent glomerular diseases[d]		15
IgA nephropathy	6	
FSGS	4	
Membranous GN	2	
Diabetic nephropathy	1	
Membranoproliferative GN	1	
Lupus nephritis	1	
De novo glomerular disease[d]		18
Minimal change disease	5	
FSGS	4	
Diabetic nephropathy	3	
Membranous GN[b]	2	
IgA nephropathy	2	
Membranoprliferative GN	1	
Proliferative GN	1	
Undetermined GN [c,d]		9
Membranous GN[b]	4	
Proliferative GN	3	
IgA nephropathy	2	
Total		73

DIFFERENTIAL DIAGNOSIS

- Nephrotic Range Proteinuria Post KT
  - Early: Within 3 months
    - Recurrent GN
    - Donor derived GN
    - De Novo GN
    - TMA
    - Viral infections
  - Late: After 1 year
    - Transplant glomerulopathy
    - Others as above

BRIEF COMMUNICATIONS: CLINICAL TRANSPLANTATION

ACUTE REJECTION PRESENTING AS NEPHROTIC SYNDROME

Ahmad, Ibrahim[1,4]; Abul-Ezz, Sameh R.[1]; Walker, Patrick D.[2]; Bonsib, Stephen M.[2]; Ketel, Beverley[3]; Barri, Yousri M.[1]

Author Information

Transplantation 69(12):p 2663-2665, June 27, 2000.

Transplantation Proceedings

Volume 46, Issue 1, January–February 2014, Pages 290-294

Early Posttransplant Nephrotic Range Proteinuria as a Presenting Feature of Minimal Change Disease and Acute T Cell–mediated Rejection

A. Nongnuch [a], M. Assanatham [a], V. Sumethkul [a], P. Chalermsanyakorn [b],

CONCLUSION

- Nephrotic syndrome can be a presentation of acute rejection post KT
- Very few cases reported
- Difficult to differentiate from denovo/ recurrent GN
- Biopsy with EM is helpful
- Podocytopathy due to T cell dysregulation may be the cause
- Treatment of rejection achieves remission
- Rituximab maybe helpful in severe cases