Case Presentation

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- A 48 y.o woman ; ESRD due to HTN ; Maintenance HD since 8 mo ago (AVF) , urine vol = 500 cc/24h
- Unsensitized
- KDPI = 63%
- Urea = 100 , cr = 7.19 , Hb = 12.8 (17/2)
- MP , ATG
- 1st day : US → RI = 0.98 - 1
- 2nd day : US → RI = 1
- 4th day : US → RI = 0.91 – 0.96
- 5th day : Bx →
- 2 weeks : urea=147 , cr=4.13

Specimen: Allograft Kidney needle biopsy

Clinical data: Kidney Tx for 5 days with anuria.

Macroscopy:

The specimen received in normal saline & composed of a core of needle biopsy specimen measuring 0.7 cm in length & 0.1cm in diameter. It was processed for L.M. studies.

L.M.FINDINGS:

Serial sections stained by H&E, PAS, Trichrome, Jones'& Congo-Red methods show:

Cortical renal tissue with presence of 4 glomeruli that all of them are almost preserved .There is intraluminal neutrophils in 2-3 capillary loops but there is not obvious endothelial cell swelling or TMA. The tubules are mostly well preserved & few tubules are dilated. Cellular debris is noted in few tubules .No evidence of tubulitis. About 5-10% of the cortical tubules are atrophic .The interstitium is fibrotic around the atrophic tubules. There is not interstitial inflammation. Hyaline arteriolosclerosis is prominent .The PTCs are within normal limits. No vasculitis.

Diagnosis:

Allograft Kidney needle biopsy:

-Inadequate specimen according to Banff criteria.

-No evidence of active rejection.

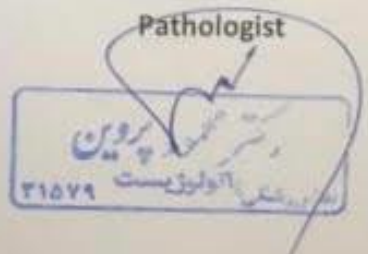
-IF/TA in 10% of the specimen.

-The IHC study is negative for C4d deposition

Note: Dear colleague, the IF/TA & vascular changes seem to be donor related.

M.Parvin M.D

Pathologist



- A 19 y.o man ; CKD with unknown ethiology; pre-emptive Tx
- Unsensitized
- Wt = 40 kg
- urea = 150 , cr= 3.5 ; Hb = 10
- KDPI = 62 %
- MP , ATG
- 2nd day : US → RI=0.6-0.65
- 5th day : Kidney Bx → infarction/ Pyelonephritis
- Cipro
- 6th , 8th US → RI = 0.6
- 9th day : Bx → infarction
- Flow PRA : neg
- urea= 204 , cr= 3.86

Specimen: Allograft Kidney needle biopsy

Clinical data: Cadaveric kidney Tx for one week with DGF

Macroscopy:

The specimen received in normal saline & composed of a core of needle biopsy specimen measuring 0.8 cm in length & 0.1cm in diameter. The remaining piece which measuring 0.2cm in length and was received in formalin with the core in normal saline processed for L.M. studies.

L.M.FINDINGS:

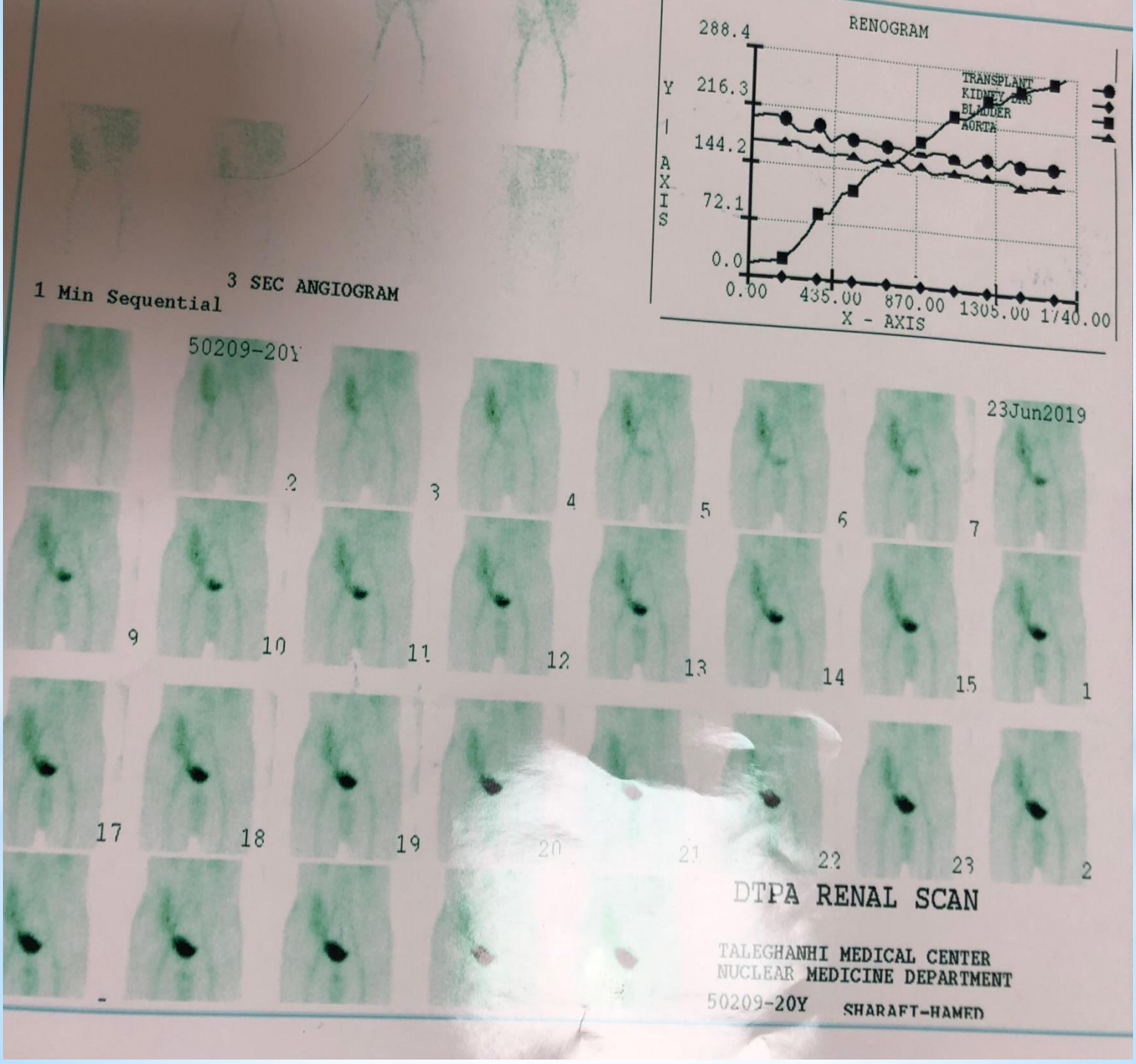
Serial sections stained by H&E, PAS, Trichrome, Jones'& Congo-Red methods show:
Corticomedullary renal tissue in which about 40% of the cores are infracted that harbors 9 globally necrotic glomeruli & there are 8 other glomeruli which are almost preserved. The tubules are necrotic in the infracted area & some of the other tubules show regenerative changes. There is no evidence of tubulitis or viral cytopathic effect. Hemorrhage is seen adjacent to the necrotic foci with prominent PTCs which contain neutrophils. No obvious vasculitis.

Diagnosis:

Allograft Kidney needle biopsy:

-Adequate specimen.
-Focal infraction with involvement of about 40% of the specimen.
-No obvious glomerulitis.
-The IHC study is negative for C4d deposition.
-Features of moderate PTCitis adjacent to the necrotic focus but present in less than 10% of the PTCs of the preserved foci.
Note: Dear colleague, although the C4d is negative but the first differential diagnosis is ABMR .The differential diagnosis can be vascular obstruction .Clinicopathologic correlation is necessary.

M.Parvin M.D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