

# LSUHSC-S Renal Pathology Consultative Services

## Interesting Case

**Case Study #: 7**  
11/2/09 Answers

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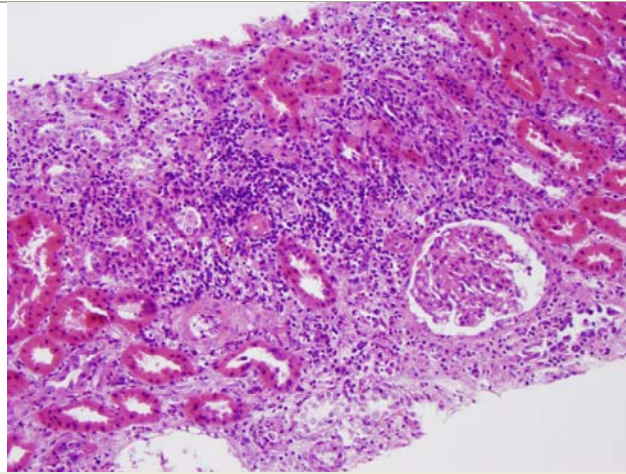
### Clinical History:

The patient is a 37 year old male with diabetes who received a kidney and pancreas transplant in 2009. He also had a history of CMV sepsis.

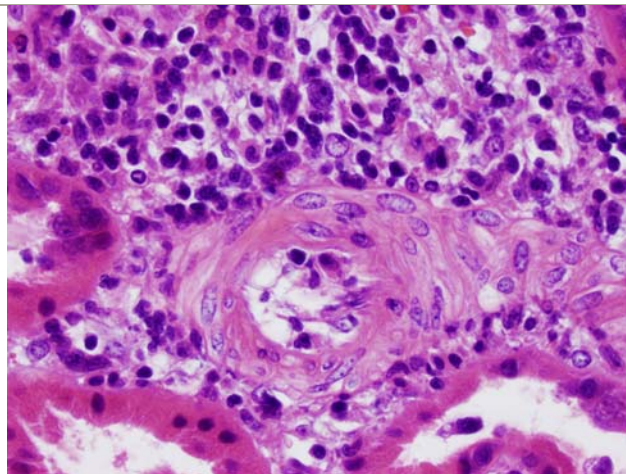
His baseline GFR is 120 which had dropped to 34 at time of biopsy.

C4d stain by immunoperoxidase was negative.

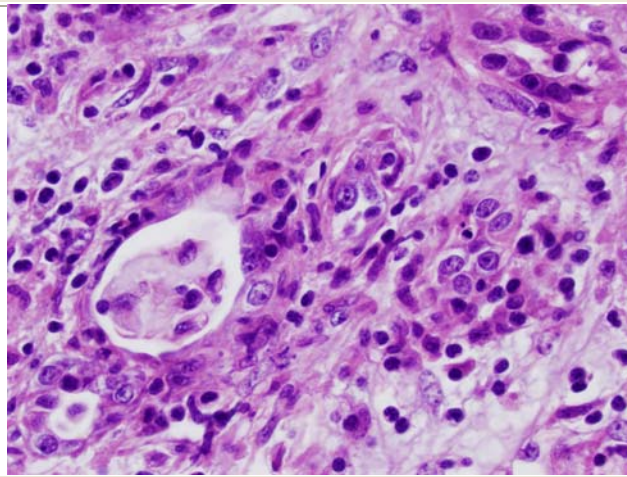
Case courtesy of Dr. Venkateswara K. Rao, MD



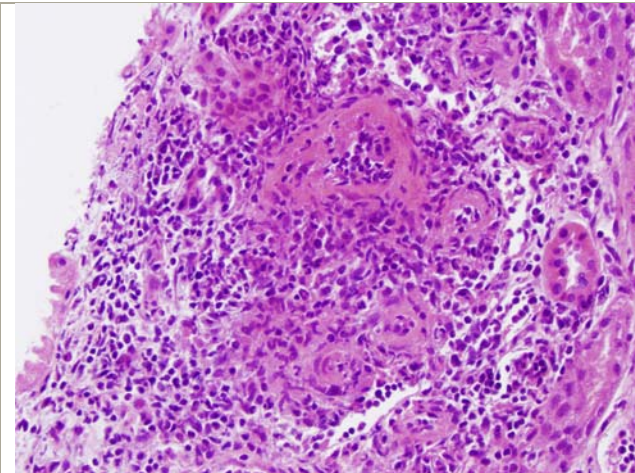
**Figure 1: The H&E stain reveals a dense inflammatory infiltrate which involved 90-100% of the cortex.**



**Figure 2: H&E showing a vessel.**



**Figure 3: H&E stain of involved tubules**



**Figure 4: H&E showing numerous arteries**

**Question:**

- 1. What are the 3 types of acute rejection, as defined by the Banff criteria?**

The three types of acute rejection are defined as:

**Type I:** tubular interstitial rejection without vascular involvement

**Type II:** vascular rejection with intimal arteritis

**Type III:** vascular rejection with transmural arterial changes signifying a severe vascular (likely antibody) rejection

- 2. What is your diagnosis based on the LM?**

The interpretation on this case was:

**Acute cellular and vascular rejection, Banff IIB.**

- 3. What entities would be included in the differential diagnosis for interstitial mononuclear inflammation and tubulitis?**

Viral infections (e.g., polyoma, CMV, adenovirus)

Posttransplant lymphoproliferative disease

Drug allergy

Calcineurin inhibitor toxicity

**4. What is the most common cause of allograft loss?**

**Chronic allograft rejection, with both interstitial and vascular components, is the most common cause of allograft loss. Histologically, the interstitial component is characterized by interstitial fibrosis, tubular atrophy and dropout and mononuclear inflammatory infiltrates. Intimal fibrous thickening with narrowing of the lumen is seen in the vascular component.**

**References:**

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**Mueller A, Schnuelle P, Waldherr R, van der Woude FJ. Impact of the Banff '97 classification for histological diagnosis of rejection on clinical outcome and renal function parameters after kidney transplantation. Transplant 2000; 69: 1123–1127.**

**Silverberg's Surgical Pathology and Cytopathology, 4<sup>th</sup> edition, 2006**

**Heptinstall's Pathology of the Kidney, 6<sup>th</sup> Edition, 2007**