**RENAL PATHOLOGY REPORT #**

**SPECIMEN**
- Kidney biopsy panel 3

**CLINICAL HISTORY**

**GROSS**
1. Received 1 linear tissue core measuring 0.4 cm in formalin.
2. Received 1 linear tissue core measuring 0.8 cm for DIF studies.
   - [Entire tissue: 0000000/17]
3. Received 1 linear tissue core measuring 0.3 cm for EM studies
   - [EM: 17-A-000]

**MICROSCOPY**
- Multiple sections stained with H&E, PAS, MT, silver methenamine and Congo red include renal cortical parenchymal area containing up to 9 glomeruli, one globally sclerosed. The remaining glomeruli show focal dilatation & congestion of capillary lumina. Two (22.2%) glomeruli reveal segmental tuft sclerosis with focal intraglomerular hyaline. Peripheral glomerular capillaries do not show thickening/ membrane texture alterations or mottling. There is no evidence of crescent formation, tuft necrosis, subendothelial /Congophilic deposits or intracapillary thrombi in the visualized glomeruli.

Tubular atrophy and interstitial fibrosis involve about 15-18% of sampled cortex. Viable tubules show focally prominent cytoplasmic vacuolar change. Few inspissated hyaline & granular casts in tubular lumina and focal mild chronic interstitial inflammation are seen.

Arteries show mild medial thickening. Arterioles show focal hyalinosis lesions.

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**Note:**
1. Slides / Blocks can be issued only on advise of the referring consultant after a minimum of 48 hours.
2. Gross specimens will be retained only for a period of 1 month after the date of reporting.
3. Contact histopathology department for any clarification.
DIF: Tissue for DIF shows up to 4 glomeruli. Following immunostaining pattern is observed:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>IgA</td>
<td>Negative</td>
</tr>
<tr>
<td>IgG</td>
<td>Negative</td>
</tr>
<tr>
<td>IgM</td>
<td>Segmental entrapment</td>
</tr>
<tr>
<td>C3</td>
<td>Negative</td>
</tr>
<tr>
<td>C1q</td>
<td>Negative</td>
</tr>
<tr>
<td>Kappa light chains</td>
<td>Negative</td>
</tr>
<tr>
<td>Lambda light chains</td>
<td>Negative</td>
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</tbody>
</table>

ELECTRON MICROSCOPY: Tissue was processed for transmission electron microscopy and ultrathin sections were stained with uranyl acetate and lead citrate. One glomerulus and accompanying tubulointerstitium were analysed.

The glomerular basement membranes thickness measured at several location in linear segments varies from 312.5 to 429.4 nm (mean 338.6 nm). No electron dense deposits, fibrils/microtubules or basement membrane lamellations are observed. Foot processes of visceral epithelial cells show diffuse effacement. Mesangial areas do not show any electron dense deposits. Tubuloreticular inclusions are not identified in endothelial cell cytoplasm. **Focal microvillus transformation of foot processes of visceral epithelial cells is also observed.**

Few tubules show confluent electron lucent vacuolar inclusions in cytoplasm. Arteries and arterioles examined do not show specific ultrastructural features.

IMPRESSION: Kidney, needle biopsy:

1. **Focal and segmental glomerular sclerosis (FSGS- NOS*) involving 2/9 (22.2%) of sampled glomeruli.**
2. DIF studies do not show significant glomerular immune deposits.
3. Ultrastructural study reveals:
   a. Glomerular basement membrane thickness ranging from 312.5 to 429.4 nm (mean 338.6 nm).
b. Diffuse effacement of visceral epithelial cell foot processes.

c. No evidence of electron dense deposits, significant glomerular basement membrane rarefaction/lamellations, or fibrils/microtubular structures in mesangial areas or glomerular basement membranes.

**COMMENT**

Morphological features in the biopsy suggest FSGS lesions, DIF studies do not reveal significant immune deposits, while ultrastructural studies show diffuse effacement of foot processes of visceral epithelial cells, indicating a primary podocytopathy / FSGS in the present context.

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