Maine Medical Center
Maine Transplant Program
Policies and Procedures
Hepatitis C Virus (HCV) and Kidney Transplantation

Purpose
To define:

- Pre-transplant testing of kidney transplant candidates for HCV antibody,
- HCV-positive Kidney Transplant Selection Criteria,
- Treatment options for HCV RNA-positive kidney candidates, and
- Post-transplant management of HCV RNA-positive recipients
- Define parameters whereby HCV+ kidneys can be offered to HCV- recipients

Background
Hepatitis C is a risk factor for poor outcomes after kidney transplantation due to:

- New-onset diabetes after transplant
    - Accelerated atherosclerotic cardiovascular disease and cardiovascular mortality
- Liver failure
- Hepatocellular carcinoma
- Premature kidney allograft failure
    - Thrombotic microangiopathy
    - Immune complex glomerulonephritis

Procedures

Pre-transplant Testing
All kidney transplant candidates are screened for the presence of HCV antibody.

If positive, HCV RNA NAT is obtained

- HCV Ab +/RNA -:
    i. Imaging evidence to rule out Chronic Liver Disease/Portal hypertension
    ii. If negative, proceed with routine transplant evaluation

- HCV Ab +/RNA +:
    i. Imaging evidence to define liver/spleen anatomy and determine presence of portal hypertension
    ii. HCV Genotype analysis
    iii. Hepatology consultation
        - Assessment of liver fibrosis by Fibroscan or MR elastography
        - Liver biopsy unless non-invasive hepatic lab and imaging are completely normal

HCV+ Recipient Selection Criteria
Inclusion Criteria:

- Compensated liver disease
    i. Normal serum albumin
    ii. Absence of coagulopathy
    iii. Absence of portal hypertension

Exclusion criteria

- Decompensated liver disease

iv. Encephalopathy
v. Coagulopathy: INR>1.8
vi. Hypoalbuminemia

- Portal Hypertension
  i. Ascites
  ii. Varices
- Advanced stage fibrosis
  - Bridging fibrosis alone may not be a contraindication to kidney transplantation as long as the liver disease is compensated and there is no evidence of portal hypertension

Treatment for HCV D-/R+ RNA+ Kidney Recipients:

Treatment deferred to hepatology with management plan to be co-developed with transplant team with specific reference to achieved GFR and pharmacokinetic drug interaction considerations.

- Protease inhibitors (Simepravir, telapravir and bocepravir) are profound inhibitors of CYP450 3A/4 thus major risk of CI toxicity and adverse kidney survival. To be avoided after transplantation

HCV+ Kidney to HCV- Recipient
Refer to HCV+ to HCV- Kidney Transplantation policy

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