MANAGEMENT OF PATIENTS WITH LIVER TRANSPLANT AND CHRONIC LIVER DISEASES DURING COVID-19 PANDEMIC: A BRIEF REVIEW

MOHAMMAD TAHER, MD; ARASH MIROLIAEE, MD; NASSER EBRAHIMI DARYANI, MD; FOROOGH ALBORZI AVANAKI, MD; NAJMEH ALETAHA, MD; MOHSEN NASIRI-TOOSI, MD; HABIBOLLAH DASHTI, MD; VAHID BASIRAT, MD; ALI JAFARIAN,
INTRODUCTION

• first reported in Wuhan in December 2019

• a novel coronavirus (SARS-CoV-2)

• pandemic in March 2020

• case-fatality rate of nearly 4%

• LFT abnormality, who admitted ranging from 14% to 53.1%.
COVID-19 AND LIVER DISEASES

- rise in ALT or decrease in serum albumin and platelet count is prognostic
- Cirrhosis a risk factor for infection
- no effect of chronic hepatitis (hepatitis B or C)
- treatment of hepatitis B and C should be continued
- Initiation of treatment not recommended
- NASH or ASH and risk of severe infection
- For autoimmune hepatitis, immunosuppressive agents should be continued
LIVER TRANSPLANTATION AND COVID-19
BEFORE TRANSPLANTATION

- Liver transplantation in the Imam Khomeini Hospital Complex affiliated to Tehran University of Medical Sciences, was started in 2002 and 1057 liver transplantations were performed until January 2020
- Organ donors must be removed from the donation list if PCR is positive
- MELD score more than 20, acute or acute-on-chronic liver failure, significant complications of chronic
- All recipients should be screened for the COVID-19 infection
- All deceased donors should be assessed for SARS-CoV-2
- IF deceased donors and recent contact, transplantation should be canceled
AFTER TRANSPLANTATION

- not travel, must take preventive measures, avoiding large crowds
- rounds with the lowest number of staff
- more frequent tele-communication
- elective procedures must be deferred
- Immunosuppressive drugs not major risk factor for mortality
- Metabolic complications cause severe COVID-19 in patients
- prolong viral shedding in liver transplanted patients
- not reduce immunosuppression without symptoms of COVID-19
HEPATOCELLULAR CARCINOMA AND COVID-19

• impact of COVID-19 on hepatocellular carcinoma is unknown

• surveillance of HCC in those at risk of HCC

• treatment of HCC in a virtual tumor board
DIAGNOSTIC PROCEDURES IN PATIENTS WITH CHRONIC LIVER DISEASE

- Endoscopic procedures are aerosol-generating
- Liver biopsy for rejection or diagnose autoimmune hepatitis

- **Therapeutic paracentesis** - transjugular intrahepatic portosystemic shunt - endoscopy for variceal bleeding - follow-up band ligation and urgent biliary drainage

- Screening programs for varices be postponed
- ERCP for post-transplant biliary strictures should be individualized
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<th>Drugs</th>
<th>Implications for Patients with Chronic Liver Disease and after Liver Transplantation</th>
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| Hydroxychloroquine ± azithromycin | • Rule out G6PDD before administration.  
• Close monitoring of drug level for cyclosporine, tacrolimus, sirolimus and everolimus.  
• Acute liver injury is quite rare. |
| Lopinavir/ritonavir   | • Sirolimus, everolimus should not be used.  
• Close monitoring of drug level for CNIs.  
• Should not be used in patients with decompensated cirrhosis. |
| Remdesivir            | • Possible elevation of ALT.  
• Safer class in chronic hepatitis B, C and cirrhosis.  
• No drug-drug interaction with routine immunosuppressive agents. |
| Methylprednisolone    | • Increases the risk of SBP and viral shedding, especially in patients with decompensated cirrhosis.  
• Increases the risk of HBV reactivation. |