

# Chronic liver disease and COVID-19:management and recommendations:

## Non-viral liver disease

黃鈞峰

高雄醫學大學附設醫院肝膽胰內科

1. Patients with COVID-19 and liver function abnormality should have investigations for the underlying cause, including screening for common liver diseases such as chronic hepatitis B, chronic hepatitis C and non-alcoholic steatohepatitis.
2. Patients with non-alcoholic fatty liver disease are at a greater risk of developing severe COVID-19 due to underlying co-morbidities (for example, obesity and metabolic syndrome).
3. Cirrhotic patients with COVID-19 may experience a higher mortality rate. Whether patients with viral hepatitis are more susceptible to liver injury in patients with COVID-19 awaits exploration.
4. Children with COVID-19 have lower chances to have abnormal liver biochemistries. Investigation of other causes of hepatitis may be warranted.
5. Drug-induced liver injury should be considered and closely monitored in particular using remdesivir, lopinavir–ritonavir, chloroquine, hydroxychloroquine, and tocilizumab for COVID-19. On the other hand. Patients with COVID-19 and abnormal liver function should not be viewed as a contraindication for investigational/off-label therapeutics.
6. Consider other causes of hepatitis in patients with COVID-19 including myositis (particularly when  $AST > ALT$ ), ischemia, cardiac injury and cytokine release syndrome if liver function deteriorates consistently and progressively.
7. Do not assume disease flares in patients with autoimmune hepatitis or acute rejection in liver transplantation recipients. The use of immunosuppressive and/or immune modulation agents should not be adjusted casually without liver biopsy confirmation. Consultation for the specialists for drug modification as needed.
8. Canceling or postponing diagnostic tests including ultrasound, computed tomography, magnetic resonance imaging is suggested to avoid COVID-19 transmission during patient transportation unless bile duct obstruction, cholangitis, and acute venous thrombosis are suspected and interventional procedures are required.