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COVID-19 and the Heart

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Myocardial Injury

- COVID-19 cause myocardial injury
- Mechanism is not known
- Identified by raised troponin
- Presentation is variable 7 to 28%
- Associated with more severe disease
- More co-morbid conditions
- Great biochemical abnormalities
- Myocarditis, stress cardiomyopathies, ischaemic injury

Heart Failure

- Limited data incidence patients COVID-19
- Complication 49% patients with severe disease, 52% at another site Wuhan
- PRO-BNP and BNP levels tended to be higher in patients with elevated trop
- May occur acute illness pre-existing or undiagnosed heart disease or acute myocardial event
- Patients also tend to have risk factors for cardiovascular disease

Clinical Features

- Clinical Presentations:
  - Typical symptoms cough, fever, dyspnoea, bilateral infiltrates
  - Minority present only with symptoms of cardiac injury without COVID-19 symptoms
- Test
  - Blood: FBC, diff, elecs, renal function, LFT
- ECG: Baseline, document QTc
  - Various ECG abnormalities
  - Common arrythmia: sinus tach, AF and A Flutter, VT
- Trop: commonly elevated in patients with severe disease

Diagnosis

- Elevated Trop, regional wall motion abnormalities, unexplained ST abnormalities
- Considerations:
  - Will it change management?
  - Will we infect others in the hospital
  - Optimal management in limited resources
- Diagnostic evaluations
  - Hx, physical exam, ECG, serial trops, Pro-BNP

Diagnosis

- Diagnostic evaluation continued
  - Is intervention required: ACS
  - No ACS mild disease trop leak
  - Severe disease echo, if impact on management
  - Ventricular wall motion abnormality stress cardiomyopathy
  - Suspected myocarditis → will it alter manageme

Management

- Optimal Management not determined
- Support care
- Heart failure standard therapy
- ACEs & ARBs : standard indications continue to be recommend
  - Do Not worsen the clinical course of disease