Updated Clinical Guidance on Multisystem Inflammatory Syndrome in Children (MIS-C): Key Messages for BC Clinicians

July 5, 2021

These key messages are intended for pediatricians, emergency medicine physicians and family physicians. They are based on known evidence as of June 8, 2021 as found in the Multisystem Inflammatory Syndrome in Children (MIS-C) Temporally Associated with COVID-19: Guidance for Clinicians in B.C.

MIS-C continues to be a rare complication of COVID-19 in children.

- It can occur in children who have had asymptomatic or symptomatic COVID-19 infection.

Children affected by MIS-C can present with a spectrum of symptoms.

- Prominent features include shock/hemodynamic instability, rash, mucocutaneous inflammation, peripheral extremity changes, gastrointestinal symptoms and cardiac dysfunction.
- Respiratory symptoms can occur but are less frequent.

Common laboratory features associated with MIS-C include:

- Lymphopenia, thrombocytopenia, elevated inflammatory markers, evidence of coagulopathy and elevated cardiac markers.

MIS-C symptoms overlap with a broad range of conditions.

- It is important to consider other diagnoses with similar presentation to MIS-C including:
  - Kawasaki Disease
  - Toxic Shock Syndrome
  - Sepsis
There should be a low threshold to evaluate for MIS-C in children who present with unexplained fever for three or more days, even if they are well-appearing on initial presentation.

- Although children with MIS-C may appear well, their condition can deteriorate within hours to days.
- Caregivers of children who appear well and are discharged should be counselled about symptoms of MIS-C and told to return to the emergency department if:
  - Symptoms worsen;
  - Symptoms do not improve within 48 hours; or
  - Fever does not abate after a total of five days since onset.
- Clinicians should liaise with the relevant specialist at BC Children’s Hospital regarding the MIS-C patient’s management and determine whether a higher level of care is needed.

The mainstay of MIS-C treatment is:

- Early fluid resuscitation, as needed.
- Intravenous immunoglobulin (IVIg).
- Systemic steroids.
- Consultation with rheumatology, infectious diseases and cardiology is suggested for children being evaluated for MIS-C.

Long-term sequelae of MIS-C is unknown at present but some children may have lingering symptoms after discharge.

For MIS-C reporting or questions, please email MISC@cw.bc.ca. Further information is available in Multisystem Inflammatory Syndrome in Children (MIS-C) Temporally Associated with COVID-19: Guidance for Clinicians in B.C.