

Inflammation and the Young Heart:

Through the Lens of MIS-C and Kawasaki Disease
Cardiology and Rheumatology Perspectives

Thursday, November 2, 2023

MINI-COURSE "How not to miss a patient with Kawasaki disease - a road towards Expert status"

- **General statement:** *"The diagnosis and management of acute Kawasaki disease patients rests on classical clinical symptoms, often incomplete, occasionally atypical, with the support of basic biological tests. There is no formal training in Kawasaki disease, however. There is expertise that comes with exposure to a vast variety of cases. This didactic session aims to expose the learner to five clinical scenarios, discuss them with experts, and revert with impactful take home messages".*

Time (EST)	Session Title	Speaker/Lead	Learning Goals/Objectives
13:00-13:05	Welcome	Brian McCrindle (Toronto, Canada) Isabelle Kone-Paut (Paris, France)	
13:05-13:15	The IKDR collaborative effort 10 years after inception	Brian McCrindle (Toronto, Canada)	
13:15-14:30	Session (75 minutes)	Moderators: Cristina Maggio (Palermo, Italy) Alessandro Marchesi (Rome, Italy) 1. CLASSIC KD (25 minutes) - Maryam Piram (Montreal, Canada) →Rash and peeling: how to distinguish among different conditions such as measles, mononucleosis, Stevens Johnson, So JIA, ... →Conjunctivitis: how to distinguish among different conditions 2. INCOMPLETE/ATYPICAL KD (25 minutes) – Teresa Giani (Florence, Italy) →Illustrate the diagnostic algorithm for incomplete presentations →Highlight the red flags of atypical presentations 3. IMAGING - (25 minutes) – Laura Greco, (Bologna, Italy) Understand different imaging requirements/findings related to different KD mimics: →Lymphadenopathies, retropharyngeal abscess →Gallbladder, liver	

14:30–14:45 Break

Moderators: Andrea Donti (Bologna, Italy), Anna Balducci (Bologna, Italy)

14:45-15:50 Session – Hands on Imaging (60 minutes)

Introduction:
Basic echocardiography findings and non-findings (15 minutes)
– Nagib Dahdah (Montreal, Canada)

Live Echocardiography Hands-on for Coronary Artery imaging (30 minutes) – Marianna Fabi (Bologna, Italy)

- Where to find the CA, acoustic windows and views (per segments)
- Where and how to measure CA diameter
- Echo machine settings / choice of probes

Moderators: Marco Cattalini (Brescia, Italy), Giovanni Calabri (Florence, Italy)

15:50-17:05 Session (75 minutes)

RESISTANT KD (25 minutes) - Isabelle Melki (Paris, France)
→Illustrate adjuvant treatment options
→Illustrate whether risk factors should prompt primary adjuvant therapy
→Illustrate delayed initial presentation and late diagnosis: to treat or not to treat

MAS AND KD (25 minutes) – Francesca Minoia (Milan, Italy)
→Illustrate MAS clinical/lab red flags
→Define treatment options for MAS

MIS-C (25 minutes) – Perrine Dusser-Benesty (Paris, France)
→Illustrate MIS-C clinical/lab/radiology red flags
→Define treatment differences and similarities with KD (shock and CAA matters)

Friday Day 2

08:00-08:15	Welcome and introductions (15 minutes)	Brian McCrindle (Toronto, Canada) Isabelle Kone-Paut (Paris, France) Marianna Fabi (Bologna, Italy) Teresa Giani (Florence, Italy) Dignitaries: Patient/Parent greetings Moderators: Teresa Giani (Florence, Italy) Nagib Dahdah (Montreal, Canada) William Orr (St. Louis, USA)
08:15-09:35	Insights from Multi-institutional and International Collaborations (80 minutes) (10-minute presentation per each of 6 speakers, followed by 20 minutes moderated panel with Q+A)	Speakers: <ol style="list-style-type: none">1. Long-Term Outcomes after the Multisystem Inflammatory Syndrome In Children: MUSIC Study-RECOVERY - Jane Newburger (Boston, USA)2. Dutch Consortium - Kawasaki Disease Study - Stejara Netea (Amsterdam, The Netherlands)3. Turk MIS-C Study Group – Sez Ozen (Ankara, Turkey) Virtual4. REMKALATINA – Rolando Ulloa Gutierrez (San Jose, Costa Rica) Virtual5. Japan Kawasaki Disease Society/KIDCAR - Yoshihide Mitani (Japan)6. Kawarabi - Mona El Ganzoury (Cairo Egypt) Virtual
09:35–09:55	Break and networking (20 minutes)	
09:55-10:40	Keynote Presentation (45 minutes) Industry sponsored	Moderators: Dirk Foell (Muenster, Germany) Ashraf Harahsheh (Washington, DC, USA) Marija Jelusic (Zagreb, Croatia) Title: Kawasaki Disease and IL-1 pathway Speakers: Moshe Arditi (Los Angeles, CA) Insights from animal models

10:40-12:20

Symposium – The pathology and pathophysiology of inflammation and cardiovascular damage (100 minutes)

May be industry-sponsored

Moderators:

Michael Portman (Seattle, USA)

Jordi Anton (Barcelona, Spain)

Luigi Lovato (Bologna, Italy)

(4 speakers 20 minutes each, 20 minute panel)

Speakers:

1. **Pathogenesis of MIS-C/KD**
Speaker **Christof Kessel (Muenster, Germany)**
2. **New therapeutic targets**
Speaker **Jane Burns (San Diego, USA)**
3. **Inflammation and the coronary/systemic arteries (KD, MIS-C, vasculitides)**
Speaker **Simon Lee (Chicago, USA)**
4. **Inflammation and the myocardium in MIS-C (KD, and other types of myocarditis)**
Speaker **Supriya Jain (New York, USA)**

12:20-13:20 Lunch and Networking

13:20-14:05

Debates

(45 minutes – 2 debates)

(6 minutes per speaker, 2 minutes rebuttal per speaker, 5 minutes Q+A, audience response after each debate)

Moderators:

Elisa Fernandez Cooke (Madrid, Spain)

Pei-Ni Jone (Chicago, USA)

Giorgia Martini (Padova, Italy)

Speakers:

- Debate 1 – KD patient with small CAA**
Pro – KD patients with small CAA should be followed in cardiology clinics – **Seda Tierney (Palo Alto, USA)**
Con – KD patients with small CAA need not be followed in cardiology clinics – **Nilanjana Misra (New York, USA)**
- Debate 2 – MIS-C in relation to KD**
Pro – MIS-C is just a specific form of KD – **Angelo Ravelli (Genova, Italy)**
Con – MIS-C is a condition distinct from KD – **Fabrizio de Benedetti (Rome, Italy)**

14:05- 15:25 Controversies in Diagnosis and

Moderators:

Deepika Thacker (Wilmington, USA)
Deepa Prasad (Phoenix, USA)
Andras Bratincsak (Honolulu, USA)

4 relevant case presentation (5 minutes), designated expert to remark (5 minutes), questions and expert panel (5 minutes) for each

**Acute Management
(80 minutes)**

May be industry sponsored

- 1. How do we manage the acute KD patient with evolving coronary artery aneurysms?**
Case presenter: **Brian McCrindle (Toronto, Canada)**
Discussant: **Therese Giglia (Philadelphia, USA)**
- 2. How do we distinguish and manage myocarditis associated with MIS-C from other causes of myocarditis?**
Case presenter: **Simona Marcora (Milan, Italy)**
Discussant: **Nadine Choueiter (New York, USA)**
- 1. Does artificial intelligence/machine learning help in recognizing incomplete KD from other febrile illnesses? Does AI/ML help distinguish MIS C and KD?**
Case presenter: **Tyler Harris (Pittsburgh, Canada)**
Discussant: **Cedric Manlhot (Baltimore, USA)**
- 2. How do we define MAS in the setting of KD and MIS-C?**
Case presenter: **Jordi Anton (Barcelona, Spain)**
Discussant: **Taco Kuijpers (Amsterdam, The Netherlands)**

15:25-15:55

**Break and networking
(20 minutes)**

Moderators:

Supriya Jain (New York, USA)
Gabriele Simonini (Florence, Italy)
Alessandra Baldinelli (Ancona, Italy)

15:55-17:15

**Abstract Presentations
(80 minutes)**

Presenters:

TBD

Theme and number to be determined by number and topic of submissions

5x15 minutes [10 minutes to present, 5 minutes for questions], OR
10x8 minutes [6 present, 2 questions]

17:15-17:30

**Wrap up of day 2 and
introduction of day 3**

Brian McCrindle (Toronto, Canada)
Isabelle Kone-Paut (Paris, France)
Patient/Parent Perspective



08:00- 08:15	Recap and business (15 minutes)	<p>Brian McCrindle (Toronto, Canada) Isabelle Kone-Paut (Paris, France) Patient/Parent Perspective</p>
08:15-10:05	<p>Controversies in Long-Term Management (80 minutes) May be industry sponsored</p>	<p>Moderators: Marianna Fabi (Bologna, Italy) Despina Eleftheriou (London, UK) Jean Ballweg (Grand Rapids, USA) Raffaella Marzullo (Naples, Italy)</p> <p>4 relevant case presentation (5 minutes), designated expert to remark (5 minutes), questions/audience response and panel discussion (5 minutes)</p> <ol style="list-style-type: none"> What is the optimal thromboprophylaxis strategy for KD or MIS-C patients with large aneurysms? Case presenter: Todd Nowlen (Phoenix, USA) Discussant: Michael Portman (Seattle, WA) What is the significance and prognosis of non-coronary artery systemic aneurysms after KD? Case presenter: Luis Martin Garrido (Mexico City, Mexico) Discussant: Matteo Ciuffreda (Verona, Italy) What long-term conditions may be triggered by KD or MIS-C? Allergy, autoimmunity, neurodevelopmental, other? Case presenter: Geetha Raghuv eer (Kansas City, USA) Discussant: Alexandre Belot (Lyon, France) What is the significance for MIS-C patients who have persistent abnormalities/LGA on cMRI? Coronary artery abnormalities? Case presenter: Aurelio Secinaro (Rome, Italy) Discussant: Ashraf Harahsheh (Washington DC, USA)
1005-1025	Break and networking (20 minutes)	
1025-1155	Abstract presentations (80 minutes)	<p>Moderators: Alvaro Lafuente Romero (Madrid, Spain) Tadej Avcin (Ljubliana, Slovenia) Lucia Mauri (Milano, Italy)</p> <p>Speakers: TBD Theme and number to be determined by number and topic of submissions</p>

5x15 minutes [10 minutes to present, 5 minutes for questions], OR
10x8 minutes [6 present, 2 questions]

1155-1215 Wrap up and farewell

Brian McCrindle (Toronto, Canada)
Isabelle Kone-Paut (Paris, France)
Patient/Parent Representatives
