

Management & Treatment of Children with Kawasaki Disease & Giant Coronary Artery Aneurysms

We invite you to participate in this brief 15-minute survey about how you care for children with Kawasaki disease and giant coronary artery aneurysm. Your participation in this research is voluntary.

This survey was designed by Audrey Dionne (Boston Children's Hospital), Nagib Dahdah (CHU Sainte-Justine), Nadine Choueiter (Children's Hospital at Montefiore) and Mia Chen (Montreal University). This project has been approved by CHU Sainte-Justine's Research Ethics Board.

If you have any questions or comments about this research project or your role as a research participant, please contact the investigators at +1-514-345-4931 ext. 5407 or rocio.rojas.hs@ssss.gouv.qc.ca.

If you have any issues or complaints about this research project, please contact the CHU Sainte-Justine ombudsman (+1-514-345-4749).

Eligibility: To be eligible, participants need to be physicians involved in the cardiac care and management of Kawasaki disease in children and/or young adults and be able to understand written English for medical purposes.

* Obligatoire

Introduction and baseline characteristics

1. If you agree to participate to the survey, select "yes". By selecting "no" you will not be able to proceed with the survey.

By agreeing to participate, you acknowledge that you were hereby informed that data will be anonymous (we will not share your personal information or your personal opinion collected in this survey). *

Yes

No

2. During the past 12 months, have you provided inpatient and/or outpatient care, as a treating physician and/or a consultant for patients with Kawasaki disease. *

No

Yes, I provided both inpatient and outpatient care for patients with Kawasaki disease.

Yes, I provided only inpatient care for patients with Kawasaki disease.

Yes, I provided only outpatient care for patients with Kawasaki disease.

3. Please estimate the number of Kawasaki disease patients you provide care for per year. *

- Less than 10 per year
- 10 to 30 per year
- More than 30 per year

4. How many years have you been in practice (do not include formal training)? *

La valeur doit être un nombre

5. Please select your specialty. *

- General pediatric cardiologist
- Interventional pediatric cardiologist
- General adult cardiologist
- Interventional adult cardiologist
- I am not a cardiologist but I am responsible for KD patients

6. Please indicate your primary employment setting, that is, the setting where you spend most of your time. *

- Groupe practice
- Hospital – not affiliated with a university/medical school
- Hospital – affiliated with a university/medical school
- Other

7. In which country do you primarily practice? *

General surveillance and imaging

8. Beyond the first year of diagnosis, how often do you consider is an appropriate interval of time to follow up on KD patients with giant CAA? *

- Every 3 months
- Every 6 months
- Every 9 months
- Every 12 months or longer

9. Considering a patient with a history of Kawasaki disease with a giant aneurysm in the proximal left anterior descending artery: normal ECG, no cardiac symptoms. The transthoracic echo shows normal ventricular function with no regional wall motion abnormalities.

Other than the baseline echocardiogram and ECG, what are your next steps in surveillance [if the patient is 2 years old]?

Please select your top 3 choices. *

| | Cardiac cath | Coronary CTA | Cardiac MRI | Stress cardiac MRI | Stress echo | PET/SPECT nuclear stress test | None of the above |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|
| 1st choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2nd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3rd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

10. Considering a patient with a history of Kawasaki disease with a giant aneurysm in the proximal left anterior descending artery: normal ECG, no cardiac symptoms. The transthoracic echo shows normal ventricular function with no regional wall motion abnormalities.

Other than the baseline echocardiogram and ECG, what are your next steps in surveillance [if the patient is 12 years old]?

Please select your top 3 choices. *

| | Cardiac cath | Coronary CTA | Cardiac MRI | Stress cardiac MRI | Stress echo | PET/SPECT nuclear stress test | None of the above |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|
| 1st choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2nd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3rd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

11. Starting at what age would you consider exercise stress testing (e.g. treadmill, stationary bike)? *

La valeur doit être un nombre

12. Do you use pharmacologic stress testing (e.g. dobutamin, dipyridamole/persantin)? *

- Yes, for younger patients or those unable to exercise
- Yes, independent of patient's age
- No, I do not use pharmacologic stress testing

13. Adolescent patient with a history of Kawasaki disease and a giant proximal right coronary artery aneurysm presents for follow-up and reports several episodes of chest pain during soccer practice over the past 6 months.

What is your next preferred step of action [if the patient has normal ventricular function and no regional wall motion abnormalities on echocardiogram]?

Please select your top 3 choices. *

| | Cardiac cath | Coronary cardiac CT | Coronary cardiac MRI | Stress cardiac MRI | Stress echo | PET/SPECT nuclear stress test | Echo/ECG follow-up |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|
| 1st choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2nd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3rd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

14. Adolescent patient with a history of Kawasaki disease and a giant proximal right coronary artery aneurysm presents for follow-up and reports several episodes of chest pain during soccer practice over the past 6 months.

What is your next preferred step of action [if the patient has depressed ventricular function on echocardiogram]?

Please select your top 3 choices. *

| | Cardiac cath | Coronary CTA | Cardiac MRI | Stress myocardial MRI | Stress echo | PET/SPECT nuclear stress test | None of the above |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|
| 1st choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2nd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3rd choice | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

15. At what age do you transition patients with a history of Kawasaki disease and giant coronary artery aneurysms to adult cardiology? *

- Adolescents (13-17 years old)
- Young adults (18-25 years old)
- I continue follow-up with an adult cardiologist

16. Would you like to comment on your experience in the surveillance of KD patients with giant CAA?

Medical management

17. Patient with a history of Kawasaki disease complicated by giant coronary artery aneurysm (right and left anterior descending artery): normal ECG, normal ventricular function and no cardiac symptoms.

Which medications would you recommend [if the patient is 2 years old]?

Please select all that apply. *

- Aspirin
- Plavix
- Anticoagulation (warfarin, low molecular weight heparin, direct oral anticoagulant)
- Beta-blocker
- Statin

18. Patient with a history of Kawasaki disease complicated by giant coronary artery aneurysm (right and left anterior descending artery): normal ECG, normal ventricular function and no cardiac symptoms.

Which medications would you recommend [if the patient is 12 years old]?

Please select all that apply. *

- Aspirin
- Plavix
- Anticoagulation (warfarin, low molecular weight heparin, direct oral anticoagulant)
- Beta-blocker
- Statin

19. Patient with a history of Kawasaki disease complicated by giant coronary artery aneurysm (right and left anterior descending artery): normal ECG and ventricular function on MRI. There is a documented 75% stenosis of the left anterior descending coronary artery on angiography.

Which medications would you recommend [if the patient is 2 years old]?

Please select all that apply. *

- Aspirin
- Plavix
- Anticoagulation (warfarin, low molecular weight heparin, direct oral anticoagulant)
- Beta-blocker
- Statin

20. Patient with a history of Kawasaki disease complicated by giant coronary artery aneurysm (right and left anterior descending artery): normal ECG and ventricular function on MRI. There is a documented 75% stenosis of the left anterior descending coronary artery on angiography.

Which medications would you recommend [if the patient is 12 years old]?

Please select all that apply. *

- Aspirin
- Plavix
- Anticoagulation (warfarin, low molecular weight heparin, direct oral anticoagulant)
- Beta-blocker
- Statin

21. Would you like to comment on your own experience in the medical management of KD patients with giant CAA?

Coronary artery intervention

22. Patient with a history of Kawasaki disease complicated by giant coronary artery aneurysm (right and left anterior descending artery). There is concern for acute coronary event.

What do you think is the most reliable element in assessing the situation of patients for acute coronary event [if the patient is 2 years old] ? *

- Symptoms
- Elevation of cardiac enzymes (troponins)
- ECG changes
- A combination of the above
- None of the above

23. Patient with a history of Kawasaki disease complicated by giant coronary artery aneurysm (right and left anterior descending artery). There is concern for acute coronary event.

What do you think is the most reliable element in assessing the situation of patients for acute coronary event [if the patient is 12 years old]? *

- Symptoms
- Elevation of cardiac enzymes (troponins)
- ECG changes
- A combination of the above
- None of the above

24. Please rank the following indications for coronary artery intervention in patients with a history of Kawasaki disease and giant coronary artery aneurysm (from most indicative to least indicative). *

Symptom driven (i.e. patients with chest pain, exercise intolerance otherwise not explained)

Based on coronary imaging of coronary artery stenosis, even in asymptomatic patients

Based on supportive myocardial perfusion / viability studies (e.g. perfusion MR, nuclear imaging, Dobutamin stress echo)

Based on ischemic changes on exercise ECG

25. You have a patient with a history of Kawasaki disease and giant coronary artery aneurysm, as well as a need for coronary intervention.

Please select your preferred approach [if intervention is required for coronary artery STENOSIS]. *

- Percutaneous coronary intervention
- Coronary artery bypass surgery

26. You have a patient with a history of Kawasaki disease and giant coronary artery aneurysm, as well as a need for coronary intervention.

Please select your preferred approach [if intervention is required for coronary artery THROMBOSIS]. *

- Systemic thrombolysis
- Intra-coronary thrombolysis
- Percutaneous coronary intervention (balloon dilation and/or stenting)
- Coronary artery bypass surgery

27. You have a patient with a history of Kawasaki disease and giant coronary artery aneurysm, as well as a need for coronary intervention.

Where would you recommend the PERCUTANEOUS CORONARY ARTERY INTERVENTION to be performed [if the patient is 6 years old]? *

- At the pediatric center, by a pediatric interventionalist.
- At the pediatric center, combined case with both a pediatric and adult interventionalist
- At an adult center, by an adult interventionalist
- At an adult center, combined case with both a pediatric and adult interventionalist

28. You have a patient with a history of Kawasaki disease and giant coronary artery aneurysm, as well as a need for coronary intervention.

Where would you recommend the PERCUTANEOUS CORONARY ARTERY INTERVENTION to be performed [if the patient is 16 years old]? *

- At the pediatric center, by a pediatric interventionalist.
- At the pediatric center, combined case with both a pediatric and adult interventionalist
- At an adult center, by an adult interventionalist
- At an adult center, combined case with both a pediatric and adult interventionalist

29. You have a patient with a history of Kawasaki disease and giant coronary artery aneurysm, as well as a need for coronary intervention.

Where would you recommend the CORONARY ARTERY BYPASS SURGERY to be performed [if the patient is 6 years old]? *

- At the pediatric center, by a pediatric cardiac surgeon
- At the pediatric center, combined case with both a pediatric and adult cardiac surgeon
- At an adult center, by an adult cardiac surgeon
- At an adult center, combined case with both a pediatric and adult cardiac surgeon

30. You have a patient with a history of Kawasaki disease and giant coronary artery aneurysm, as well as a need for coronary intervention.

Where would you recommend the CORONARY ARTERY BYPASS SURGERY to be performed [if the patient is 16 years old]? *

- At the pediatric center, by a pediatric cardiac surgeon
- At the pediatric center, combined case with both a pediatric and adult cardiac surgeon
- At an adult center, by an adult cardiac surgeon
- At an adult center, combined case with both a pediatric and adult cardiac surgeon

31. Would you like to comment on your own experience pertaining to CA intervention in KD patients?

32. Have you had any cases of coronary artery intervention (systemic thrombolysis, percutaneous coronary artery intervention, coronary artery bypass graft)? *

- Yes
- No

33. Would you be interested in contributing and sharing your patient data with our team for an international, multi-institutional collaboration for future research and publication on coronary artery intervention? *

- Yes
- No

Contact information

If yes, please provide your contact information and preferred e-mail address to be contacted again here:

<mailto:mia.chen.1@umontreal.ca>

This is to ensure the anonymity of your survey responses. Your contact information will be received separately and will not be linked to the answers you provided in this survey.

End of the survey

Thank you for your time and consideration in completing this survey.

We would be grateful if you could forward this survey link to practicing clinicians who may not have received our e-mail and who treat children with Kawasaki disease.

<https://forms.office.com/r/V42FnFmzRH>

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