

Paediatric pulmonary thromboembolism

CANADIAN PAEDIATRIC SURVEILLANCE PROGRAM

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REPORTING INFORMATION

(To be completed by the CPSP)

Report number: _____

Month of reporting: _____

Province: _____

Today's date: _____

Please complete the following sections for the case identified above. If the information asked below is not readily available, please leave it blank. Strict confidentiality of information will be assured.

CASE DEFINITION FOR PAEDIATRIC PULMONARY THROMBOEMBOLISM

Report any patient less than 18 years of age (up to their 18th birthday) with a new diagnosis of confirmed or suspected pulmonary thromboembolism. Pulmonary thromboembolism is defined as in situ thrombus or embolism, including fragments and fat embolism, situated anywhere in the pulmonary arterial circulation from the right ventricle (RV), through the outflow tract, to the peripheral and subsegmental regions of the pulmonary arteries. Report patients including, but not limited to, asymptomatic patients, post-operative patients, pregnant or recently pregnant patients, and deceased patients.

Confirmed pulmonary thromboembolism – patient fulfills one of four criteria:

1. Pulmonary thromboembolism diagnosed on computerized tomography (CT) pulmonary angiography OR conventional pulmonary angiography OR magnetic resonance imaging/magnetic resonance pulmonary angiography
2. Ventilation–perfusion (V/Q) scan reporting high probability of pulmonary thromboembolism
3. Echocardiogram demonstrating thrombus in the RV OR outflow tract OR main pulmonary artery/branch pulmonary arteries OR in transit
4. Pulmonary thromboembolism identified on autopsy

Suspected pulmonary embolism – patient fulfills one of two criteria:

1. Clinical suspicion of pulmonary thromboembolism AND V/Q scan reporting intermediate probability of pulmonary thromboembolism
2. Clinical suspicion of pulmonary thromboembolism AND echocardiogram demonstrating RV dysfunction with no other explanation

Month first seen: _____

SECTION 1 – DEMOGRAPHIC INFORMATION

1.1 Date of birth: _____ / _____
MM YYYY

1.2 Sex: Male Female Intersex

1.3 If patient is < 2 years of age, gestational age: _____ weeks OR Term OR Unknown

1.4 Province/territory of residence: _____

SECTION 2 – DETAILS OF PRESENTATION OF PULMONARY THROMBOEMBOLISM (i.e., when it occurred)

2.1 Was the patient symptomatic? Yes No, pulmonary thromboembolism was incidental finding

If No, proceed to Section 3.

2.2 Type of facility where patient **presented** for symptoms (choose **one** most appropriate):

- Tertiary care hospital (paediatric) Tertiary care hospital (non-paediatric)
 Regional/community hospital Nursing station/cottage hospital
 Outpatient clinic (e.g., urgent care, walk-in, practitioner office)
 Died prior to presentation to hospital/diagnosed on autopsy Other, specify: _____

- 2.3 Location in facility where patient **presented** with symptoms (choose **one** most appropriate):
- Emergency department Clinic Intensive care unit (paediatric) Intensive care unit (neonatal)
- Intensive care unit (adult) Step down/high dependency unit
- Operating room Case room Recovery room
- Ward, specify: Medical Surgical Obstetrical Other, specify: _____
- Died prior to presentation to hospital/diagnosed on autopsy
- Other, specify: _____
- 2.4 Indicate clinical features at the time of presentation/when the pulmonary thromboembolism occurred (select as many as apply):
- Tachypnea Shortness of breath Hypoxia Cyanosis
- Chest pain Cough Hemoptysis Tachycardia
- Hypotension Cardiovascular collapse Altered level of consciousness
- Rash Mottled skin
- Extremity swelling/redness suggestive of deep vein thrombosis
- Other, specify: _____

SECTION 3 – DETAILS OF DIAGNOSIS

- 3.1 Type of facility where diagnosis was confirmed (choose **one** most appropriate):
- Tertiary care hospital (paediatric) Tertiary care hospital (non-paediatric)
- Regional/community hospital Nursing station/cottage hospital
- Outpatient clinic (e.g., urgent care, walk-in, practitioner office)
- Died prior to presentation to hospital/diagnosed on autopsy
- Other, specify: _____
- 3.2 Length of time between presentation to health care facility and diagnosis: _____ hours OR Unknown
- 3.3 For **confirmed cases**, specify test confirming diagnosis:
- CT pulmonary angiogram Conventional pulmonary angiogram MRI
- V/Q scan, high probability Echocardiogram Autopsy
- 3.4 For **suspected cases**, specify test supporting diagnosis:
- V/Q scan, intermediate probability Echocardiogram with RV dysfunction
- 3.5 Specify the type of pulmonary thromboembolism:
- Thromboembolic In situ thrombus Fat embolism Unknown
- 3.6 Specify the location(s) of pulmonary thromboembolism:
- RV thrombus/outflow tract Main or branch pulmonary arteries
- Lobar Subsegmental/peripheral Unknown
- 3.7 Select and provide values for any ancillary tests supporting the diagnosis:
- D-dimer, indicate value: _____ and units: D-dimer units Fibrin equivalent units
- Electrocardiogram (ECG) demonstrating RV strain
- Other, specify: _____
- No ancillary tests
- Unknown
- 3.8 Indicate whether the patient was being treated with an anticoagulant medication at the time of presentation to a health care facility:
- Yes No Unknown
- If Yes, indicate medication and dose, if known: _____*

SECTION 4 – RISK FACTORS FOR THROMBOEMBOLIC DISEASE

4.1 Indicate whether the patient had any of the following conditions present at the time of presentation/when the pulmonary thromboembolism occurred (select all that apply):

Congenital/inherited prothrombotic disorder, indicate:

- Factor V Leiden, if known: homozygote heterozygote
 Prothrombin mutation, if known: homozygote heterozygote
 Antithrombin deficiency
 Protein C deficiency
 Protein S deficiency
 Other, specify: _____

Acquired prothrombotic disorder, indicate:

- Von Willebrand factor elevation Factor VIII elevation Lupus anticoagulant
 Anticardiolipin Anti-beta-2 glycoprotein Other, specify: _____

Sickle cell disease

Malignancy, indicate: Haematologic Solid tumor Central nervous system tumor

Heart disease, indicate pathology: _____ Repaired/palliative Unrepaired

Infection, indicate organism: _____ OR Unknown organism

- Sepsis, indicate source (e.g., bacteremia, pneumonia, joint): _____
 Endocarditis
 Other infection, specify: _____

Connective tissue disorder

Inflammatory bowel disease

Rheumatologic disease

Nephrotic syndrome

Exogenous hormone therapy (including oral contraceptive), specify indication: _____

Pregnancy, specify ____ weeks gestation OR ____ weeks postpartum

Recent surgery

Recent trauma

Obesity

Other presumed risk factor(s), specify: _____

4.2 Did the patient have a history of thromboembolic disease? Yes No Unknown

If Yes, indicate:

Prior pulmonary thromboembolism

Prior thrombosis (select all that apply): Cerebrovascular Hepatic/portal
 Renal Extremity

4.3 Did the patient have a deep vein thrombosis at the time of pulmonary thromboembolism?

Yes No Unknown

If Yes, indicate location: _____

AND mode of diagnosis: Ultrasound

MRI

CT angiography

Other, describe: _____

Unconfirmed (e.g., clinical suspicion + D-dimer)

4.4 Did the patient have a central venous catheter at the time of presentation with pulmonary thromboembolism?

Yes No Unknown

If Yes, indicate type, if known: _____

SECTION 5 – THERAPIES AND COMPLICATIONS OF THERAPY

- 5.1 Did the patient receive medical or surgical treatment(s) for pulmonary thromboembolism? Yes No
If No, proceed to Section 6.
- 5.2 Length of time between diagnosis and first treatment: ____ hours OR before confirmation OR Unknown
- 5.3 Indicate all treatments initiated (select all that apply):
- Systemic thrombolysis, indicate for each attempt (can be simultaneous or sequential):
- Drug: _____ Bolus dose (per kg): _____ Infusion rate: _____
- Drug: _____ Bolus dose (per kg): _____ Infusion rate: _____
- Drug: _____ Bolus dose (per kg): _____ Infusion rate: _____
- Unfractionated heparin, specify: Bolus dose (per kg): _____ Infusion rate: _____
- Low molecular weight heparin, indicate drug(s) and dose(s) (per kg): _____
- Oral anticoagulant, indicate drug(s) and dose(s) (per kg): _____
- Antiplatelet therapy, indicate drug(s) and dose(s) (per kg): _____
- Cardiac catheterization, indicate:
- Thrombus retrieval
- Directed thrombolytic therapy, indicate drug and dose (per kg): _____
- Surgical embolectomy
- IVC filter placement
- Performed by: Cardiology Interventional radiology Other, specify: _____
- 5.4 Did the patient experience any complications of therapy?
 Yes No Unknown
If Yes, describe: _____

SECTION 6 – SHORT-TERM OUTCOMES AND MORTALITY

- 6.1 Was the patient a hospital inpatient at time of presentation/diagnosis?
 Yes No Unknown
If Yes, indicate: length of stay in hospital after presentation: ____ calendar days (count calendar day of presentation as day zero; include calendar day of discharge from hospital or death)
- 6.2 If the patient was not a hospital inpatient at presentation, did the patient require admission to hospital?
 Yes No Unknown
If Yes, indicate: length of stay in hospital: ____ calendar days (count calendar day of admission as day zero; include calendar day of discharge from hospital or death)
- 6.3 Did the patient require admission/transfer to the paediatric intensive care (PICU)?
 Yes No Unknown
If Yes, indicate: length of stay in PICU: ____ calendar days (count calendar day of admission to PICU as day zero; include calendar day of discharge from PICU)
- 6.4 Did the patient die as a result of pulmonary thromboembolism?
 Yes No Unknown
If Yes, indicate duration of time between presentation and death: ____ calendar days (count calendar day of presentation as day zero; include calendar day of death)
- 6.5 Did the patient die as a result of therapeutic complications?
 Yes No Unknown
If Yes, indicate duration of time between treatment and death: ____ calendar days (count calendar day of treatment causing death as day zero; include calendar day of death)

- I agree to be contacted by the CPSP for further information on this questionnaire.
- I do not wish to be contacted by the CPSP for further information on this questionnaire.

SECTION 7 – REPORTING PHYSICIAN

First name _____ Surname _____

Address _____

City _____ Province _____ Postal code _____

Telephone number _____ Fax number _____

E-mail _____ Date completed _____

Thank you for completing this form

(PPT 2019/12)