

Ontario Clinical Guidance: Vaccine Induced Prothrombotic Immune Thrombocytopenia (VIPIT) following AstraZeneca COVID-19 Vaccination

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Guidance from Ontario's COVID-19 Science Advisory Table



SCIENCE BRIEFS

Vaccine-Induced Prothrombotic Immune Thrombocytopenia (VIPIT) Following AstraZeneca COVID-19 Vaccination

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Key Message

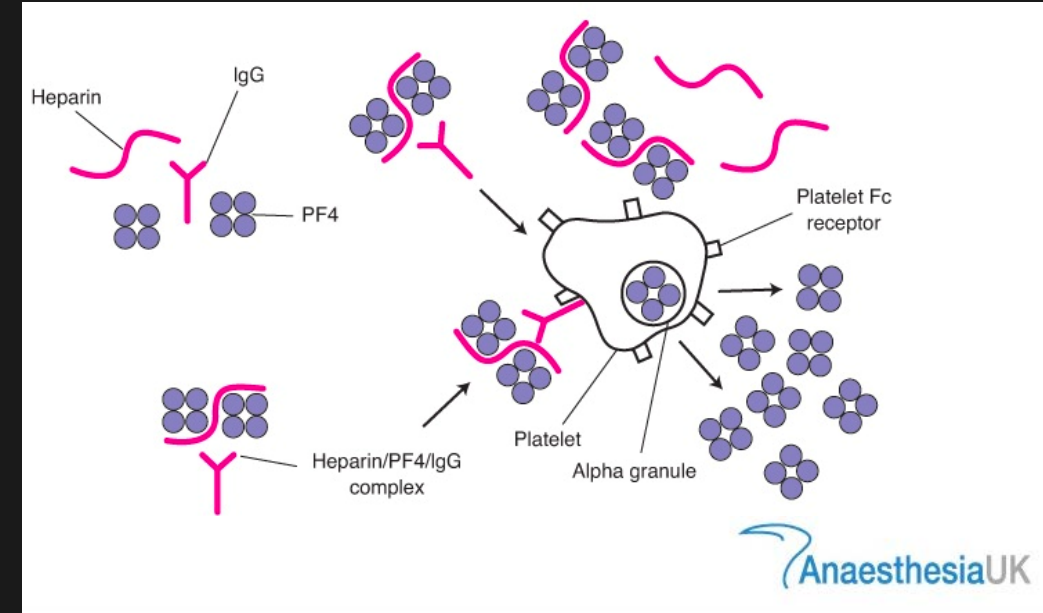
This Science Brief provides information about Vaccine-Induced Prothrombotic Immune Thrombocytopenia (VIPIT), a rare adverse event following AstraZeneca COVID-19 vaccine.

The Science Brief describes the pathophysiology, presentation, diagnostic work-up and treatment of VIPIT. Figure 1 presents a decision tree for diagnosing and ruling out VIPIT.

If your jurisdiction is giving AZ vaccine, you must be aware of this rare and serious adverse event

Increasing evidence of association between AstraZeneca vaccine (AZD1222) and serious clots

- VIPIT: Highly prothrombotic state caused by platelet-activating antibodies directed against platelet factor 4 (PF4)
 - Looks like autoimmune HIT
 - Serious clots + low platelets + DIC
 - Occurs 4 to 20 days after vaccination
- Epidemiology unclear
 - 1 in 125,000 to 1 in 1 million people (?)
 - Women under age 55 (?)
 - Case fatality rate >40% (?)



https://gth-online.org/wp-content/uploads/2021/03/GTH_Stellungnahme_AstraZeneca_3_19032021.pdf

<https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/rapid-response-recommended-use-astrazeneca-covid-19-vaccine-younger-adults.html>

<https://www.ema.europa.eu/en/news/covid-19-vaccine-astrazeneca-benefits-still-outweigh-risks-despite-possible-link-rare-blood-clots>

Messaging:

Key symptoms to be aware of

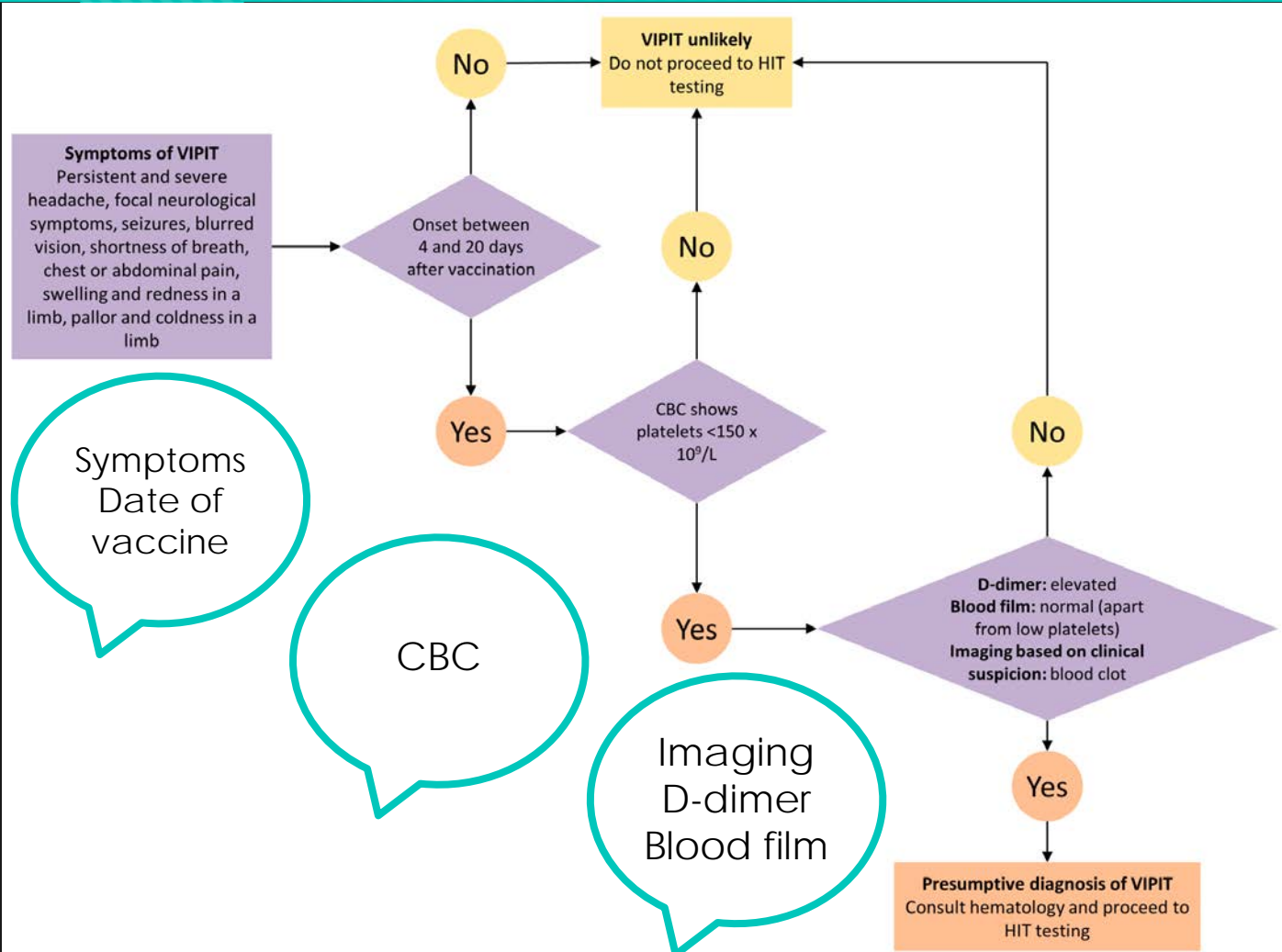
- Patients with VIPIT may present with CSVT, or with *other arterial or venous clots*
 - Persistent and severe headache, focal neurological symptoms, seizures, or blurred vision (suggesting CSVT or arterial stroke)
 - Shortness of breath or chest pain (suggesting PE or ACS)
 - Abdominal pain (suggesting portal vein thrombosis)
 - Limb swelling, redness, pallor, or coldness (suggesting deep vein thrombosis or acute limb ischemia)
- **VIPIT seems to occur between 4 to 20 days post-vaccination. Symptoms in this time frame should raise clinical suspicion of VIPIT.**

Suspected
VIPIT

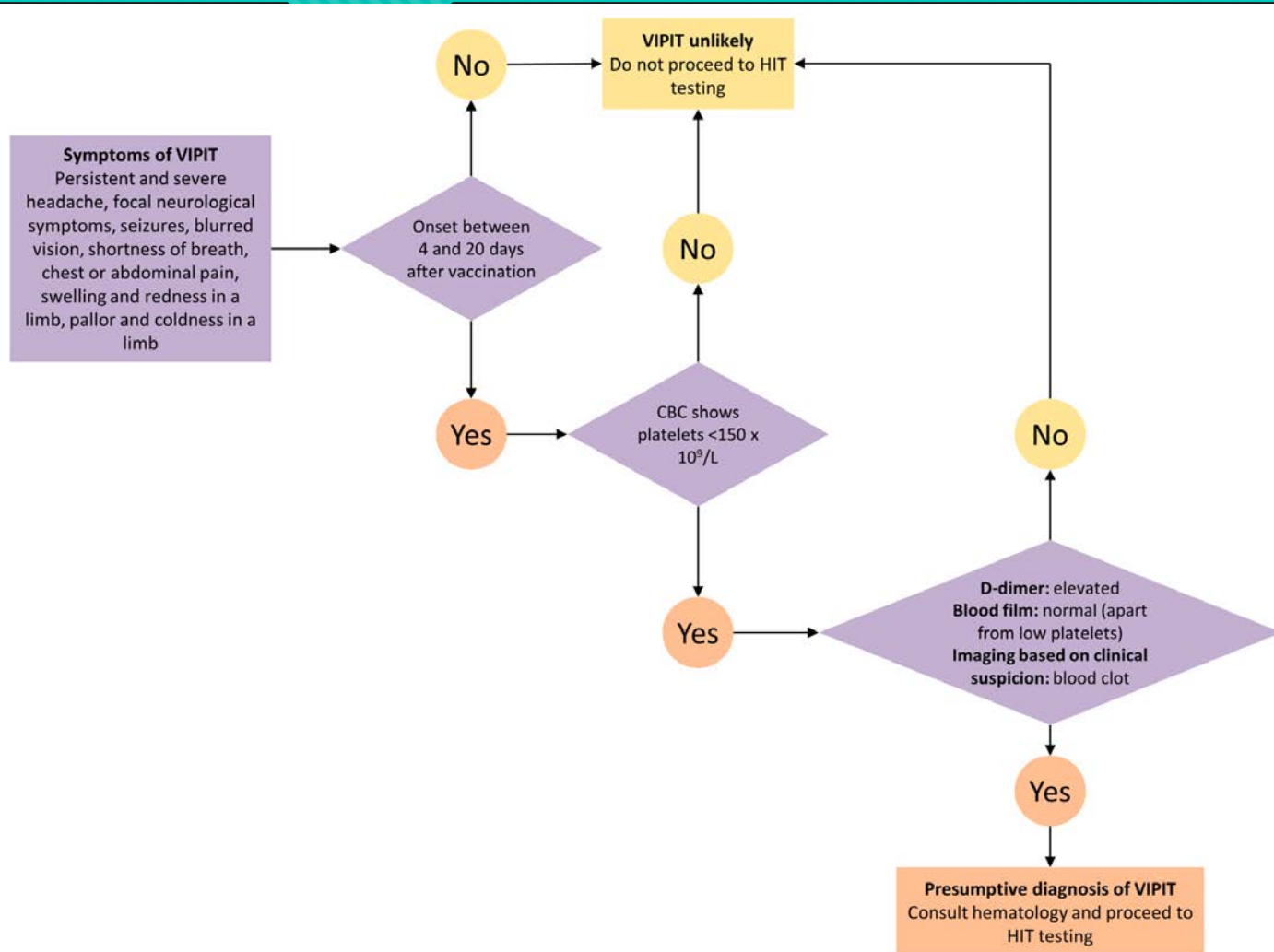
Presumptive
VIPIT

Confirmed VIPIT

Messaging: Diagnosis and Rule Out



Messaging: Confirming the diagnosis



Presumptive diagnosis?

- Start empiric treatment
- Order HIT ELISA
- Call Hematology: guidance on further treatment and confirmatory (functional) HIT testing

<http://fhs.mcmaster.ca/plateletimmunology>

REPORTING IS ESSENTIAL

Messaging: Initial Management

Treating Blood Clots in Patients with Presumptive or Confirmed VIPIT

1. No heparin
2. No platelet transfusions
3. First line anticoagulants: direct oral anti-Xa inhibitors (e.g., rivaroxaban, apixaban, edoxaban)
4. Consult hematology (in person, virtually, by phone)
5. IVIG 1 g/kg daily for 2 days for severe or life-threatening blood clots

[https://covid19-sciencetable.ca/
sciencebrief/vaccine-induced-prothrombotic-
immune-thrombocytopenia-vipit-following-
astrazeneca-covid-19-vaccination](https://covid19-sciencetable.ca/sciencebrief/vaccine-induced-prothrombotic-immune-thrombocytopenia-vipit-following-astrazeneca-covid-19-vaccination)