Clinical Care Pathway of VITT/TTS in British Columbia

ALL patients presenting with thrombosis symptoms 4-28 days after AZ/JJ vaccine exposure should get a STAT CBC at hospital-based labs or Lifelabs

VITT/TTS Suspected
AZ or JJ vaccine 4 – 28 days ago AND
- platelet count <150 x 10^9/L or
- signs or symptoms of thrombosis

Signs of symptoms consistent with **arterial or venous thrombosis** ANYWHERE:
- Severe headache, vision changes or other neurological symptoms
- Unexplained shortness of breath or chest pain
- Unexplained back or abdominal pain
- Swelling or redness in a limb
- Acute pain with pallor in a limb
- Petechiae, easy bruising or bleeding

Send to ED for STAT peripheral smear*, INR, aPTT, D-dimer, fibrinogen and COVID testing
*microangiopathy with red cell fragmentation and hemolysis is rarely described in VITT/TTS

Any one of:
- High D-dimer
- Low fibrinogen
- Abnormal INR/aPTT
- High suspicion of clot

Y → VITT/TTS Possible

- Ask if recent exposure to heparin/LMWH (within 1-4 weeks)
- Call Hematology (if no local Hematology, call 604-875-5000 to page VGH Hematologist)
- **MUST** call Laboratory to do stat HIT assay for query VITT/TTS (draw 2 red and 2 blue top tubes) and complete requisition§
- Order appropriate imaging to look for clots and other labs if indicated

Thrombosis Confirmed or High suspicion of clot

N → Follow up results for HIT ELISA (Immucor assay at St. Paul's (PHC) or Royal Jubilee (VIHA)

Y → VITT/TTS Likely
Start empiric treatment
Do not wait for lab results

HIT ELISA positive

N → VITT/TTS Unlikely

Y → VITT/TTS Likely

N → Manage according to standard practice
Order imaging and labs if needed to rule out thrombosis as dictated by symptoms (eg. CTPA, US, angiogram, ECG, troponin)
ONLY CT/MR venogram can rule out CVST

Thrombosis Confirmed

Y →
- Treat as standard VTE/ATE
- DOAC preferred to avoid HIT
- Check platelet count in 3-5 days

N → VITT/TTS Excluded
Possible post-vaccine ITP – Contact Hematology

- Discuss VITT/TTS treatment with Hematology (and Stroke Neurology if CVST confirmed or suspected)
- Give IVIG 0.5 – 1.0 g/kg daily (max total dose 2.0 g/kg) (**Ensure blood drawn for HIT assay BEFORE giving IVIG**)
- Use non-heparin anticoagulant (eg. apixaban, rivaroxaban, fondaparinux, argatroban)
- Consider fibrinogen or cryoprecipitate if patient bleeding and fibrinogen is less than 1.0 g/L
- Do not give platelet unless life-threatening bleeding or need life-saving surgery
- Lab to confirm samples are sent to McMaster for SRA

Legend

ATE	Arterial thromboembolism
AZ	AstraZeneca
CTPA	CT pulmonary angiogram
CVST	Cerebral venous sinus thrombosis
DOAC	Direct oral anticoagulant (apixaban, rivaroxaban)
ED	Emergency Department
HIT	Heparin-induced thrombocytopenia
ITP	Immune thrombocytopenic purpura
IVIG	Intravenous immunoglobulin
JJ	Johnson & Johnson
SRA	Serotonin release assay (platelet activation assay)
TTS	Thrombosis and thrombocytopenia syndrome
VITT	Vaccine-induced immune thrombotic thrombocytopenia
VGH	Vancouver General Hospital
VTE	Venous thromboembolism

§McMaster lab requisition: https://fhs.mcmaster.ca/plateletimmunology/vipit.html

Version date: 30April2021