

# Vaccine induced immune thrombotic thrombocytopenia (VITT)/ Vaccine induced prothrombotic immune thrombocytopenia (VIPIT)

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Condition for which Ig use is in exceptional circumstances only

<b>Specific Conditions</b>	<ul style="list-style-type: none"><li>• Vaccine induced immune thrombotic thrombocytopenia (VITT)</li></ul>
<b>Indication for Ig Use</b>	<ul style="list-style-type: none"><li>• Treatment of vaccine induced immune thrombotic thrombocytopenia (VITT)</li></ul>
<b>Level of Evidence</b>	Insufficient data (Category 4a)
<b>Description and Diagnostic Criteria</b>	<p>A rare syndrome of thrombosis, often cerebral venous sinus thrombosis, and thrombocytopenia has been described including by the Thrombosis and Haemostasis Society of Australia and New Zealand (THANZ) after COVID-19 vaccination and is highlighted as affecting patients of all ages and genders; at present there are no clear signal of risk factors.</p> <p>This immune thrombosis syndrome is currently being called several names: “VITT” vaccine induced immune thrombotic thrombocytopenia; “VIPIT” vaccine induced prothrombotic immune thrombocytopenia; “VATT”: vaccine associated thrombosis and thrombocytopenia and; “TTS”: thrombosis with thrombocytopenia syndrome .</p> <p>As advised by THANZ (17 April 2021), VITT is characterised as follows.</p> <p>Antibodies against platelet antigens (PF4) post vaccination have been detected using ELISA methods, with some similarity to heparin induced thrombocytopenia (HIT) but with a distinct profile on immuno- and functional testing. Platelet activating antibodies on functional testing are considered pathological, and requisite for confirming the diagnosis of VITT.</p> <p>Although most reported cases involve presentation with cerebral venous sinus thrombosis, other sites have also been involved (splanchnic, pulmonary embolism, arterial ischaemia), so any patients presenting with symptoms of thrombosis shortly after vaccination should be considered carefully for VITT, and testing initiated in the appropriate clinical context, even though it is anticipated that most cases of common site venous thrombosis (DVT in the lower leg) will be unrelated to VITT. In the absence of thrombocytopenia, management as per usual VTE pathway in consultation with a sub-specialist thrombosis haematologist is advised.</p> <p>Patients presenting with organ specific symptoms of thrombosis (eg. Persisting or severe headaches unresponsive to simple analgesia, abdominal pain or respiratory symptoms) 4-30 days after vaccination should be reviewed carefully for signs of thrombosis or bleeding. Other neurological symptoms of cerebral vein thrombosis can include visual changes, seizures, focal neurological deficits, and general symptoms of encephalopathy.</p> <p>VITT is <b>suspected</b> if:</p> <ol style="list-style-type: none"><li>1. the platelet count is <math>&lt;150 \times 10^9/L</math> AND</li><li>2. D-dimers are elevated (5x Upper Limit Normal (ULN)) OR</li><li>3. Fibrinogen levels are reduced.</li></ol> <p>VITT is <b>probable</b> if there is evidence of thrombosis in suspected VITT. VITT is <b>possible</b> if there is no evidence of thrombosis in suspected VITT. Not all thrombocytopenia post vaccine is VITT. Immune thrombocytopenia post COVID-19 vaccine is also reported and SHOULD NOT be treated in the same</p>

	<p>manner.</p> <p>VITT is a distinct syndrome that is separate to HIT. Standard HIT diagnostic pathways are NOT appropriate for the diagnostic work-up of VITT.</p>
<b>Justification for Evidence Category</b>	This is a newly described condition, with evidence pending.
<b>Diagnosis Requirements</b>	A diagnosis must be made by a Haematologist.
<b>Qualifying Criteria for Ig Therapy</b>	<ul style="list-style-type: none"> <li>• Suspected or confirmed diagnosis of vaccine induced immune thrombotic thrombocytopenia (VITT)</li> </ul>
<b>Review Criteria for Assessing the Effectiveness of Ig Use</b>	<p>Review is not mandated for this indication however the following criteria may be useful in assessing the effectiveness of therapy.</p> <ul style="list-style-type: none"> <li>• Clinical response to Ig therapy</li> </ul>
<b>Dose</b>	<ul style="list-style-type: none"> <li>• <b>Initial Dose (IVIg)</b> - 1 - 2 g/kg in 2 divisions is recommended, but may be given in up to 5 divisions. One further dose may be requested in confirmed cases if clinical response is poor.</li> </ul> <p>Retreatment with 1-2 g/kg may be given where confirmation of VITT is received and where there is incomplete clinical improvement after the initial Ig dose, as assessed by a Haematologist.</p> <p>The aim should be to use the lowest dose possible that achieves the appropriate clinical outcome for each patient.</p> <p>Refer to the current product information sheet for further information on dose, administration and contraindications.</p>

### Bibliography

Thrombosis and Haemostasis Society of Australia and New Zealand (THANZ) Vaccine Thrombocytopenia Working Group, 2021, 'Suspected Vaccine Induced Prothrombotic Immune Thrombocytopenia (VIPIT)/Vaccine induced immune thrombotic thrombocytopenia VITT' 17 April 2021.

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