

Thursday, 21 October 2021

Health Protection



Blood clotting following COVID-19 vaccination

Information for Health Professionals

As with all COVID-19 programme resources, this publication is subject to extensive and regular revisions and we recommend linking to the latest version to ensure that you are giving the most up-to-date clinical advice and guidance.

1. What is the condition that has been reported following COVID-19 vaccination?

In recent weeks, there have been a small number of reports from the UK and internationally of an extremely rare condition characterised by thromboembolic events (blood clots) accompanied by thrombocytopenia (low platelets) following the first dose of the AstraZeneca (AZ) COVID-19 vaccination.

The most notable presentation is cerebral venous sinus thrombosis (CVST) where blood clots develop in the cerebral veins occurring together with low platelet counts. These cases are particularly unusual because despite low platelets, there is progressive thrombosis (formation of blood clots which block blood vessels). Whilst the cases reported to date have primarily been venous clots, arterial clots have also been reported. All cases reported in the UK to date have occurred after the first dose of AZ vaccine.

Typical laboratory features include a low platelet count, very raised D Dimer levels – above the level expected for venous thromboembolism (VTE) and inappropriately low fibrinogen. Antibodies to platelet factor 4 (PF4) have been identified and so this has similarities to heparin-induced thrombocytopenia (HIT), but is occurring without the patient receiving any heparin treatment.

Further information on the investigation and treatment of suspected cases has been published by the Expert Haematology Panel of the British Society of Haematology and is available at [yabirni_1](#).

2. What are the risk factors for developing this condition?

This condition is known to occur naturally although the underlying risk factors have not yet been fully established. A detailed review of suspected cases of this condition following COVID-19 vaccination is ongoing by the Medicines Healthcare products Regulatory Agency (MHRA), supported by PHC and other professional groups.

This will help us to understand the risk factors for developing this condition. The current data suggests that the overall incidence is around 4 per million first doses of the AZ vaccine administered. Although cases have been reported in all ages and genders, there appears to be a trend for increasing incidence with decreasing age amongst adults, with the highest incidence reported in the younger adult age groups.

3. Is this condition only associated with the AZ vaccine?

All suspected cases following vaccination with any of the COVID-19 vaccines being used in the UK are undergoing a detailed review by the MHRA. Up to and including 31st March, the MHRA received 79 reports of thrombotic events with low platelets of which 44 were cerebral venous sinus thrombosis (CVST), out of a total of 20.2 million doses of COVID-19 AZ vaccine given by that date. Two cases of blood clots (thromboembolism) with thrombocytopenia were reported for the Pfizer/BioNTech vaccine up to and including 31st March, but a detailed medical review by the MHRA concluded that these were very unlikely to be related to the vaccine.

Revised 21 October 2021

This factsheet contains important information for health professionals on very rare blood clotting following COVID-19 vaccination. It answers questions on risk factors, signs and symptoms and how to report a suspected blood clot following vaccination.

Details

Format

A4 9 pages

Target group

Health professionals

Downloads

Attachment	Size
Blood clotting after COVID vaccination - health professionals 10.21	420.33 KB

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