Position Statement

September 2024

The contents of this document are believed to be current. Please continue to refer to the website for in-date versions.

COVID-19 Vaccines and Blood Transfusion

(including pre-deposit autologous and directed donations)

Background

The Green Book has the latest information on vaccines and vaccination procedures, for vaccine preventable infectious diseases in the UK.[1] Within the Green Book, chapter 14a provides details of the COVID-19 vaccines in use in the UK and details of their deployment.

Post-vaccination pharmacovigilance is the responsibility of the Medicines and Healthcare products Regulatory Agency (MHRA) and the manufacturers.

The vaccines approved for use in the UK have met strict standards of safety, quality and effectiveness set out by the MHRA. Any COVID-19 vaccine that is approved must go through all the clinical trials and safety checks all other licensed medicines go through. The COVID-19 vaccines contain either mRNA or modified adenoviral DNA which does not replicate and is not copied on cell division. While a small amount may get into the blood, this is not critical to how the vaccines work and any blood penetration that does occur is likely to be short-lived. The COVID-19 vaccines approved in the UK present no risk to the safety of the blood supply or to patients receiving a blood transfusion.

Some non-active ingredients (lipids) contained in mRNA vaccines are naturally present in the body, these include cholesterol and phosphatidylcholine. These compounds will be slowly cleared from the bloodstream and present no safety risk to recipients.

Advice from the MHRA and from the European Centre for Disease Prevention and Control[2] is that no additional blood and plasma safety measures are recommended in relation to the occurrence of suspected adverse reactions to COVID-19 vaccines and that individuals vaccinated with inactivated/killed viruses or vaccines that do not contain live agents (such as mRNA vaccines and replication-deficient virus vector based vaccines) may be accepted as donors provided they feel well.

Requests for ‘unvaccinated’ blood or blood components

UK Blood Services, in common with other blood services internationally,[3] cannot provide information about the vaccine status of donors to recipients or their treating clinicians. There are no clinical reasons regarding the safety and efficacy of transfusion to justify gathering and supplying this information. Although donors are asked about recent immunisations at the time of donation, this information is required to check the donor’s eligibility to donate. It is not possible or practical to test for mRNA in donated blood.

Therefore, blood components are never labelled with such information. Hospitals are not able to inform patients about whether or not a unit of blood was donated by a vaccinated individual. Every patient has the option to accept or decline transfusion, following the hospital's informed consent policy, processes, and procedures.

Requests for directed donations from named individuals

Directed donation involves taking blood from a related (family) or unrelated named individual for the exclusive purpose of supplying blood to a named patient. Directed donation is not supported by UK Blood Services, except in the exceptional circumstance that blood from local, national or international allogeneic donors is not available for a patient with a rare red cell or platelet type.

Directed donation is not indicated for conscientious objections to donor blood.

Requests for pre-deposit autologous donation (PAD)

PAD involves collecting blood from a patient up to five weeks before a surgical procedure and storing it in case blood transfusion is required during or after surgery because of bleeding and anaemia.[4]

PAD can result in lowering the pre-operative haemoglobin level. This is at odds with the aims of Patient Blood Management (PBM) recommendations which serve to optimise pre-surgery haemoglobin levels. PAD may therefore increase the likelihood of a peri-operative transfusion. Routine PAD is not recommended, except in exceptional circumstances, such as a patient with a rare blood group or multiple red cell antibodies whose transfusion requirements cannot be met with allogeneic blood.

PAD is not indicated for conscientious objections to donor blood.

Patients at serious psychiatric risk because of anxiety about exposure to blood should be managed with appropriate counselling and psychiatric advice. PBM strategies should be discussed and considered as part of a wider blood conservation approach, tailored to the patient's status and the nature of any planned surgery.

References

1. www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book (accessed 27.09.24)
2. www.ecdc.europa.eu/sites/default/files/documents/Supply-SoHO-COVID-19--second-update-erratum-Feb-2021.pdf (accessed 27.09.24)
3. www.aabb.org/docs/default-source/default-document-library/positions/joint-statement-blood-community-reiterates-the-safety-of-americas-blood-supply-for-patients.pdf?sfvrsn=c2fc3d52_10 (accessed 27.09.24)
4. McSporran W, et al. The use of predeposit autologous donation: Guideline prepared by the BSH Blood Transfusion Task Force. *Br J Haematol.* 2024; 204(6): 2210–2216. doi.org/10.1111/bjh.19374

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