BTS
British Transplantation Society

The Voice of Transplantation in the UK

Measles Guidance

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BTS guidance on the care of children and adults in receipt of, or on the waiting-list for, solid organ transplantation

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In response to the rising incidence of measles cases in more than one region in the UK, the UK Health Security Agency (UKHSA) released National Measles Guidance (https://www.gov.uk/government/publications/template-letter-to-paediatrician-oncologists-and-immunologists-on-measles), including advice to professionals caring for patients who are already immunosuppressed or who may be immunosuppressed in future. The high-level UKHSA guidance covers broad principles of care, and these are expected to be interpreted by professional societies to derive specific operational guidance for specialist patient pathways. In light of the above, the British Transplantation Society guidance for care of patients in receipt of, or on the waiting-list (WL) to receive, a solid organ transplant (SOT) is as below.

Immunosuppression, for the purposes of interpreting the measles guidance, is as defined in the UKHSA Green Book, Chapter 6 (https://www.gov.uk/government/publications/contraindications-and-special-considerations-the-green-book-chapter-6), and is expected to encompass the majority of SOT recipients and WL patients. The currently available measles vaccine preparations (Priorix, MMRVaxPro) are live vaccines and therefore contraindicated in the majority of patients who are receiving or have received in the last six months, immunosuppression for SOT (with rare exceptions for patients on very low dose steroids only – please refer to the Green Book or contact a virologist for risk versus benefit discussions in individual cases).

The BTS recognises the absence of high-quality published literature to derive guidance in this area. Organ transplantation was uncommon when measles incidence was widespread up to the 1950s and 1960s. During the era of modern SOT, measles was very rare until 2016/2017, when increased disease incidence associated with reduced vaccine uptake became evident in the UK and elsewhere. The absence of significant chronological overlap between the two conditions is partly responsible for the paucity of high-quality published literature in the field. Anecdotal evidence suggests that immunosuppressed patients, in the absence of prior protective immunity, can be subject to significant morbidity and mortality risk. For these reasons, the BTS has derived pragmatic guidance on measles

risk-stratification and post-exposure management of SOT and WL patients, which are similar to the management of this patient cohort with respect to Varicella Zoster Virus (VZV).

Risk stratification

(1) Recommendation: All SOT recipients and WL patients should have readily accessible information on documented completion of full measles vaccination or measles IgG status

In line with UKHSA guidance, risk-stratification of this patient cohort requires documentation of full measles vaccination OR serological testing for measles IgG status. Evidence of completion of measles vaccination can be sought and obtained from primary care. However, data completeness may be variable for patients completing vaccine courses prior to 2000. In the absence of such evidence, patients should be offered measles IgG testing at the next face-to-face interaction with the clinical team. A single test to document IgG status is recommended to enable risk stratification (similar to VZV risk stratification). Regular repeat testing and/or testing following changes to immunosuppression is not mandated.

The documentation on measles vaccination or serological status should be easily and reliably accessible to transplant clinical teams to enable risk stratification decisions.

Management of immunosuppressed SOT recipients

(2) Recommendation: No further action is needed as part of routine care for currently immunosuppressed solid organ transplant recipients who have documented evidence of vaccination or immunity as evidenced by positive measles IgG status.

If such a patient under your care reports a measles exposure, contact your local Health Protection Team [contact details (both in and out of hours phone numbers) can be found at: https://www.gov.uk/health-protection-team]. This will enable appropriate risk assessment of the index case (and therefore the nature of exposure your patient may have had) and support with your risk assessment for post-exposure prophylaxis with intravenous immunoglobulin.

(3) Recommendation: Administration of live MMR vaccine is likely to be contraindicated for the majority of currently immunosuppressed solid organ transplant recipients who do not have documented evidence of vaccination or immunity as evidenced by positive measles IgG status. Offer MMR vaccination to immediate family members of the patient (if not already vaccinated).

The eligibility and safety of using live vaccines should be re-assessed in the SOT recipient if there are planned reductions in immunosuppression intensity or discontinuation of immunosuppression.

If such a patient under your care reports a measles exposure, contact your local Health Protection Team [contact details (both in and out of hours phone numbers) can be found at: https://www.gov.uk/health-protection-team]. This will enable appropriate risk assessment of the

index case (and therefore the nature of exposure your patient may have had) and support with your risk assessment for post-exposure prophylaxis with intravenous immunoglobulin.

Management of patients who are about to be immunosuppressed

(4) **Recommendation: No further action is needed for patients who are about to be immunosuppressed (e.g., already wait-listed or about to be wait-listed for organ transplantation or scheduled to receive a living donor transplant) if they have documented evidence of vaccination or immunity as evidenced by positive measles IgG status.**

Planned immunosuppression start (e.g., receipt of an organ transplant) can proceed as necessary and additional testing after commencement of immunosuppression is not advised.

(5) Recommendation: Offer MMR vaccination to the patient and their immediate family (if family members are also unvaccinated) if the patient is about to be immunosuppressed (e.g., already wait-listed or about to be wait-listed for organ transplantation or scheduled to receive a living donor transplant) but does not have documented evidence of vaccination or immunity as evidenced by positive measles IgG status.

The recommended vaccine course in adults is two doses given four weeks apart. For children and young people under 18 years of age, one vaccine is offered, followed by a further assessment of serology (four weeks after first dose) and a further vaccine dose offered in the absence of seroconversion.

If patients make an informed choice of not accepting the clinical recommendation to complete the vaccine course and/or for family members to be vaccinated, document the risk versus benefit discussion and patient decision before planned immunosuppression starts.

For patients making an informed choice to accept vaccination, individualised risk versus benefit assessment and shared decision-making with the patient should inform whether commencement of immunosuppression is delayed until after vaccination is complete (e.g., suspension from the waiting-list or delay to wait-listing or delay to scheduled living donor transplant). For most patients, suspension from organ transplant waiting lists and/or delay to waitlisting or delay to scheduled live donor transplant exclusively for the purpose of completing measles vaccination is unlikely to have an acceptable risk versus benefit ratio.