SaBTO
Advisory Committee on the Safety of Blood, Tissues and Organs

22nd May 2023

SaBTO recommendations for universal screening of deceased solid organ donors for Kaposi's Sarcoma-associated Herpes Virus infection

Several cases of fatal primary Kaposi's Sarcoma-associated Herpes Virus (KSHV), also known as Human Herpes Virus type 8 (HHV-8), infection have been observed in recent years in recipients of solid organ transplants (SOT) in the UK.

Fifteen events were investigated by the UK Organ and Tissue Donation and Transplantation service between 2015 and 2021, triggered by a diagnosis of HHV-8 disease in SOT recipients; this led to the identification of several clusters of transmission of probable or proven donor origin.

SaBTO established a workstream to look at the current scientific evidence and assess the size and impact of donor-related HHV-8 infection on recipient outcomes, particularly in the setting of deceased organ donation, where these unfavourable outcomes were being seen. Need and feasibility of implementing appropriate interventions were also assessed.

A selection of possible initiatives was considered, ranging from promoting awareness about the infection to using virological testing strategies to identify risk to recipients. Consideration was given to potential negative effects on the availability of safe organs for transplantation, and on graft function and recipient survival resulting from inadvertent changes in recipients' immunosuppression regimens.

Serological tests are required for identification of asymptomatic, infected individuals. HHV-8 antibody testing is complex, very restricted in availability, and its utility in the context of organ donor screening was carefully explored. Currently, donor testing can only be effectively performed post-transplantation. With increased awareness and clinical need, assay development and availability may change in the future, allowing expansion of testing strategies.

An economic analysis was performed, mainly to examine whether there were financial barriers that might render any specific intervention too costly to deliver in the setting of deceased organ donation. With a focus on averting deaths due to donor-derived primary HHV-8 infections occurring within 12 months of transplantation, there was no indication that unfeasible costs would be incurred for the implementation of interventions that have the potential to improve patient outcomes and save lives.

This work primarily addresses the specific challenges of deceased organ donation and severe donor-derived primary HHV-8 infection in recipients. Knowledge of donor status enables selective recipient monitoring, early diagnosis, and potential avoidance of death. Clinical and virological surveillance will be key; correct and timely diagnosis are essential as treatment of the various forms of disease presentation differs.

A risk-based assessment option for living donors and recipients can be considered in the appropriate context, based on transplant centre experience of HHV-8 disease and their donor and recipient epidemiology. For most centres, HHV-8-driven disease is extremely rare and when seen, it is mainly due to reactivation of pre-existing disease in the recipient, with largely non-fatal outcomes. The same principle of early diagnosis applies as significant disease that cannot be controlled by changes in immune-suppressive drugs can occur. Enhanced awareness of HHV-8 brought about by the introduction of testing in response to the severe outcomes seen in deceased organ donation should also inform future guidance for living donors and recipients.

As per current clinical practice, risk of transmission of disease should continue to be discussed with prospective transplant recipients. The introduction of post-transplant HHV-8 testing is a positive step towards mitigation of harm to patients. A balanced approach was sought to improve outcomes for patients, observing the overriding benefits of organ transplantation.

The working group recommendations for HHV-8 testing were approved by SaBTO and have been subsequently ratified by the four UK health administrations. In summary these are:

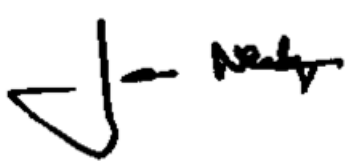
Main Recommendation

- Introduction of universal serological screening of deceased donors for HHV-8 infection. To begin with, such testing should be centralised. The programme should be monitored and reviewed to inform necessary changes.

Additional Recommendations

- The organ procurement organisation with delegated function from the regulatory body shall co-ordinate the collection of information on recipient outcomes in collaboration with transplant centres and review the data regularly, at least on an annual basis. This is necessary to maximise the benefits from this program both in terms of understanding clinical outcomes and in terms of accrual of knowledge to inform future strategy.
- UK Health care professionals should familiarize themselves with the epidemiology and post-transplant clinical course of HHV-8 infection to enable early diagnosis; they should also report cases of post-transplant HHV-8 infection and disease to NHSBT OTDT to enable appropriate investigations and actions.
- Guidance on monitoring and management of recipients identified at risk of HHV-8 infection and disease should be incorporated into appropriate clinical practice guidelines.
- Guidelines should be developed to inform the need for screening of recipients and for living donors; this should be done with the appropriate professional bodies.

Yours sincerely,



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