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Title Laboratory examinations to test for Epstein-Barr virus as part of post-transplant lymphoproliferative disorder

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Aim

The aim of this work is to assess the clinical utility of measuring the Epstein-Barr virus (EBV) viral load through real-time genetic amplification (PCR) and testing for serum anti-EBV antibodies as part of post-transplant lymphoproliferative disorder (PTLD), with a view to their inclusion in the list of Procedures in Laboratory Medicine reimbursed by the National Health Insurance system in France.

Conclusions and results

The data collected (12 good practice guidelines and view of 5 professional organisations) indicate that EBV PCR has a place in the monitoring of transplant patients with a high risk of developing PTLD. This examination is conducted in clinical practice with the aim of preventing the development of PTLD and monitoring the pre-emptive treatment implemented if necessary.
Concerning the conditions of performing the PCR, this assessment provided information on the sample to use (whole blood), the units of the result (IU/ml) or the frequency of testing (weekly to bi-monthly for at least the first 3 months following the transplant in high-risk patients). Pending standardisation of this measurement, monitoring should be performed with the same technique and in the same laboratory.
As for EBV serological tests, the same data support their use before transplantation in the donor and the recipient to determine the EBV immune status and the resulting risk of PTLD.
However, the data collected do not enable specification of the viral load threshold value or its kinetics triggering introduction of pre-emptive treatment, the benefit of curative treatment monitoring with EBV PCR or the type of antibodies (isotypes and target antigens) to be tested for during the pre-transplant serological assessment.
It should be noted that EBV PCR does not replace histopathological examinations enabling a diagnosis of PTLD and that the initiation of pre-emptive treatment, its discontinuation or its adjustment cannot be decided on EBV viral load alone.

Recommendations

Given the low level of evidence on which the recommendations contained in this report are based, studies should be continued or implemented to acquire new data confirming or disproving the benefit of EBV PCR in the various situations suggested (in particular in the monitoring of different types of treatment).

Methods

The method of evaluation used comprises an analysis of the consistency between the content of the health insurance application, the data from the critical analysis of the synthetic literature identified by a comprehensive literature search then selected according to explicit criteria, and the reasoned position of professional organisations.

The whole report has been validated by the HAS Board.

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