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| **Quick Backtype-Heart Transplant** | | | | | | | |
| **Purpose** | This procedure provides instructions for the tube testing of patient ABO group antibodies to determine if a heart transplant patient needs to have a plasma apheresis before heart transplant surgery. | | | | | | |
| **Policy Statements** | * Testing the patient’s plasma/serum for expected antibodies with A1 and B reagent * Testing will be performed on all patients who are going to have an ABO incompatible heart transplant regardless of age. * The patient should have a previous blood type on file. * This is a STAT test. | | | | | | |
| **Test Codes** | BTHT | | | | | | |
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| **Materials** | **Equipment** | | | **Reagents** | | | **Supplies** |
| * Centrifuge * Agglutination Viewer | | | * Biotestcell A1 and B | | | * 10 x 75 mm test tubes * BB Pipettes * Marker |
|  | | | | | | |
| **Sample** | Fresh patient samples of EDTA or clotted whole blood collected following general blood collection procedures are acceptable. See **Collection of Patient Specimens.**  The specimen should be tested as soon as possible after collection. If test is delayed, the EDTA or collated specimen should be stored at 2-6°C and may be tested within 10 days from collection.  Specimens exhibiting gross hemolysis or contamination should not be used. | | | | | | |
| **Quality Control** | Refer to **TS 18.2 Performing Daily Reagents Quality Control**  Reagents must be evaluated each day of use with appropriate controls. | | | | | | |
| **Before**  **You Begin** | 1. Confirm sample acceptability and review patient history per procedure 2. Label tubes per **TS 4.6 Labeling Tubes** | | | | | | |
| **Procedure** |  | | | | | | |
|  | **Step** | Action | | | | | |
| Backtype | 1 | Pipette 2 drops of the patient plasma/serum to the corresponding labelled tube. | | | | | |
|  | 2 | Add 1 drop of reagent red cells to tubes to the corresponding labelled tube. | | | | | |
|  | 3 | Mix all tubes. | | | | | |
|  | 4 | Centrifuge for the posted optimal time in a calibrated serologic centrifuge | | | | | |
|  | 5 | Remove the tubes from the centrifuge and confirm the tube ID with the request and on the computer screen or downtime worksheet | | | | | |
|  | 6 | Gently resuspend the cell button and examine macroscopically for hemolysis and agglutination immediately after centrifuging. | | | | | |
|  | 7 | Immediately record the grade reactions in the computer or on the downtime worksheet. | | | | | |
|  | 8 | Call CVOR with result. | | | | | |
|  |  | | | | | | |
|  | **Step** | Action | | | | | |
| Entering results for Quick Backtype | 1 | Enter Blood Order Processing by the patient sample accession number. | | | | | |
|  | 2 | Click on the Patient Specimen tab. | | | | | |
|  | 3 | Enter the grading of the tube agglutination reading in the appropriate grid cell.    Grid Cells  BTQA=A1C  BTQB= BC  **You need to use these codes or you will get QA failures. These codes post reaction results as numbers in Cerner which is need for ABO incompatible transplants.**   |  |  | | --- | --- | | A1CB/BCB Grid Results | | | Keyboard Key | Reaction | | ! (P1) | 1+ | | @ (P2) | 2+ | | # (P3) | 3+ | | $ (P4) | 4+ | | ) (N0) | 0 | | | | | | |
|  | 4 | Record the backtype interpretations in the interpretation field according to the testing procedure.   |  |  | | --- | --- | | Interpretations | | | P1BT | 1+ | | P2BT | 2+ | | P3BT | 3+ | | P4BT | 4+ | | N0BT | 0 | | | | | | |
|  | 5 | Review tube reaction results and interpretation entry if QA failures occurs.   |  |  | | --- | --- | | **If** | **Then** | | An enter error was made | Re-enter tube reading results and/or interpretation. | | Entry confirmed | * Acknowledge QA warnings. All QA failures have to be reviewed and responded by a second tech. * Respond to QA failures with a reason code or free text entry. | | | | | | |
|  | 6 | Save Results | | | | | |
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| **Limitations** | Tubes should be read immediately following centrifugation and delays may cause a dissociation of antigen-antibody complexes resulting in false negative or weak positive reactions.  Cold agglutinins, a positive direct antiglobulin test, or rouleaux may cause false positive reactions | | | | | | |
| **References** | 1. Product Insert, Biotestcell A1 and B, Bio-Rad Medical Diagnostics, current edition 2. AABB Standards, current edition | | | | | | |
| **Approval**  **Workflow** | Transfusion Service/Lab Director | | | | | | |
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| **Historical Record** | **Version** | | **Written/Revised by:** | | **Effective Date:** | **Summary of Revisions** | |
| 1 | | S. Cassidy | | 06/17/2022 | Initial Version | |