Methodist Health Services Corporation
& UnityPoint Health Methodist
Department of Pathology
Peoria, IL 61636

Effective: December 13, 2001
Revised: February 14, 2017

UM MIC03.020

Transfusion Reaction Culture For Transfusion Reactions to Plateletpheresis

Principle

The Blood Bank has started investigating transfusion reactions to plateletpheresis. In the past, the Blood Bank did not investigate these reactions due to the lack of RBC's in the product; thereby, eliminating the risk of a hemolytic transfusion reaction. Now, the investigation of reactions to plateletpheresis is centered on the risk of bacterial contamination. The investigation of the reaction is limited to a culture of the product in question. Following is a list of symptoms associated with bacterial contamination: Fever greater than 3°F rise, Rigors (shaking chills), Shortness of breath (breath>28/minute), Rise or drop in systolic blood pressure (>30 mmHG), Tachycardia (heart rate>120/minute or >40/minute rise), Nausea or vomiting, Lower back pain.

Clinical Significance

The transfusion of contaminated platelet products results in the seeding of bacteria directly into the blood stream resulting in bacteremia and subsequent septicemia which can be life threatening.

Specimen

1. Remainder of platelet product is delivered to Microbiology for culture by the Blood bank.
2. Enter the platelet bag aseptically to obtain a sample of the remaining product. This is best accomplished by using an alcohol wipe to clean one of the ports and entering the port with a sterile syringe and needle. The volume of specimen cultured is dependent upon the quantity of product left after transfusing patient.
3. Order Aerobic culture on patients' account. Patients are charged for cultures.
4. Be sure to Include the unit number of the product in order entry

Reagents

1. 5% Sheep Blood Agar
2. Chocolate Agar
3. MacConkey Agar
4. Anaerobic CDC Plate

Instrumentation/Equipment

1. 10 cc syringe w/needle
2. Inoculating loop
3. Incinerator
4. CO_2 Incubator set at 35°C

Quality Control

All media and reagents are quality controlled by the manufacturer and by lot # or shipment when received in our laboratory. (exception: exempt media)

Procedure

1. Aseptically withdraw platelet product from bag with a sterile needle and syringe.
2. Inoculate media by placing one to two drops on each of the agars and up to 1 ml in the anaerobic broth.
3. Streak plates for standard isolation.
4. Incubate media in the CO_2 incubator set at 35°C.
5. Observe cultures for growth at 18 -24 hours (day 1). Issue preliminary report.
6. Perform identifications on any organisms isolated.
7. Communicate findings with Blood bank personnel.
8.
9. Isolates do not require susceptibility testing unless requested by physician order.

Reporting Results

1. Issue a preliminary report on day 1.
2. Report positive cultures as found, and update as new information becomes available through additional testing.
3. Negative cultures are held 2 days prior to finalizing as "No growth".
4. Positive results should be communicated to the Blood bank as soon as they become available.
5. Print chart copies of final culture reports. Distribute these to Blood bank. The Blood bank will distribute the chart copy along with the Suspected Platelet Transfusion Reaction Review form to the Pathologist on clinicals. The Pathologist will issue an interpretation. The Pathologist interpretation will then be entered into the final culture report.

Procedural Notes/Problem-Solving Tips

Good communication between the nursing unit, physician, Blood bank, and Microbiology section is essential to insure that platelet transfusion reactions are handled and reported appropriately.

References

Service Update: Transfusion Reactions to Plateletpheresis issued October 26, 2001.

UnityPoint Health Methodist Laboratory is a CAP accredited facility, as of 7/1/11 the responsibility of new and/or substantially revised policies and procedures will be restricted the Laboratory Director whose name appears on the CLIA certificate, whose signature appears below. The biennial review will be completed by the Administrative Director.

POLICY CREATION :		
Author:	***Terry A. Smith – Laboratory Manager***	***December 13, 2001***
Medical Director:	***Douglas McGrady, MD***	***January 30, 2002***

MEDICAL DIRECTOR		
DATE	NAME	SIGNATURE
February 12, 2017	Elizabeth A. Bauer-Marsh	Elizabeth A. Bauer-Marsh DMD
SECTION MEDICAL DIRECTOR		
March 10, 2015	Lori Racsa, DO	L Racsa D.O.

REVISION HISTORY (began tracking 2011)			
Rev	**Description of Change**	**Author**	**Effective Date**
1	Reviewed and signed	T Smith	06/02/11
2	Formally indexed: Micro II – 8T	L. Racsa	9/14/15
3	Removed HLAB order number	T Nuese	2/2/16
4	Updated test order and number of days to final as no growth	T. Nuese	6/23/16
5	removed required storage for no growth cultures	T. Nuese	1/31/17

Reviewed by

Lead	Date	Coordinator	Date	Manager	Date	Medical Director	Date
				Darryl A. Smith	6/2/11	DMcKnight MD	6/9/11
				Darryl A. Smith	7/9/12	DMcKnight MD	7/10/12
E Penning	5/12/14			Theresa R King	6/6/14	DMcKnight MD	6/10/14
		Teresa Nuese	2/1/16			L Racsa D.O.	2/2/16

		Teresa Nuese	6/23/16			L Racca D.O.	6/24/16
		Teresa Nuese	1/31/17			L Racca D.O.	2/14/17