

## DETERMINATION OF BLOOD GROUPS - TRANSFUSION

### LEARNING OUTCOMES

#### KNOWLEDGE

- KNOWLEDGE OF THE FOUR MAJOR BLOOD TYPES (PHENOTYPES) IN THE ABO SYSTEM AND THE TWO MAIN "NATURALLY OCCURRING" ANTIBODIES TO RED CELL ANTIGENS
- KNOWLEDGE OF COMPARING AND CONTRASTING ABO AND RH BLOOD GROUPS
- KNOWLEDGE OF THE THE PATHOPHYSIOLOGY OF HEMOLYTIC DISEASE OF THE NEWBORN
- RECOGNITION OF THE THE TWO BASIC PHYSIOLOGICAL CONSEQUENCES OF TRANSFUSION OF INCOMPATIBLE BLOOD

#### SKILLS

- IN AN EMERGENCY SITUATION, TO BE ABLE TO INDICATE WHAT KIND OF BLOOD IS GIVEN, IF NECESSARY, BEFORE TYPING IS COMPLETE, AND WHAT KIND OF BLOOD IS GIVEN, IF NECESSARY, BEFORE CROSS-MATCHING IS COMPLETE.
- THE ABILITY TO PREPARE AND ASSIST THE TRANSFUSED PATIENT.
- ADMINISTRATION TECHNIQUES OF BLOOD DERIVATES

#### COMPETENCES

- DESCRIBE AND RECOGNIZE THE TWO BASIC PHYSIOLOGICAL CONSEQUENCES OF TRANSFUSION OF INCOMPATIBLE BLOOD.
- COMPARE AND CONTRAST ABO AND RH BLOOD GROUPS.
- IDENTIFY WHICH BLOOD GROUPS MAY BE SAFELY TRANSFUSED INTO PATIENTS WITH DIFFERENT ABO TYPES.
- APPLYING THE PRINCIPLES OF ETHICS AND PROFESSIONAL ETHICS IN THE FIELD

### ECTS CREDITS

2 ECTS

<i>Theoretical courses</i>	<i>Teaching Methodology</i>	<i>Number of hours</i>
Introduction to Antigens, Antibodies, and Transfusion Reactions. Definition. History of transfusion. The role of immunity in blood transfusion reactions. Agglutination. Hemolysis.	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
The ABO Blood Group. The two main "naturally occurring" antibodies to red cell antigens	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Rh Blood Groups. Different types of blood products.	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Determining ABO Blood Types Determination of blood compatibility. The three essential steps in blood	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2



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compatibility testing.		
	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Hemolytic disease of the newborn	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2

<b>Practical activities</b>	<b>Teaching Methodology</b>	<b>Number of hours</b>
Determining ABO Blood Types	Practical demonstrations, practical manoeuvres characteristics for determining ABO blood types. Virtual laboratory	4
Care plan to prepare and assist the transfused patients	Practical demonstrations, practical manoeuvres characteristics for the transfused patients. Virtual laboratory	4
Administration techniques of blood derivate	Practical demonstrations, practical manoeuvres characteristics for blood transfusion. Virtual laboratory	4
Recognition and management of transfusion side effects.	Practical demonstrations, practical manoeuvres characteristics for management of transfusion side effects	4
Recognition and management of hemolytic disease of the newborn	Practical demonstrations, practical manoeuvres characteristics for hemolytic disease of the newborn	4
Administration of blood in an emergency situation before cross-matching is complete	Practical demonstrations, practical manoeuvres characteristics for emergency situation. Virtual laboratory	4
Care of patients who refuse blood transfusion. Blood-saving bundle.	Practical demonstrations, practical manoeuvres characteristics to reduce blood loss caused by diagnostic blood sampling and to minimize the development of anemia in a high-risk group patients. Virtual laboratory	4

### References

1. H Klein. Mollison's Blood Transfusion in Clinical Medicine 12e. 2014
2. M. Murphy. Practical Transfusion Medicine 5e. 2017



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Evaluation	
<i>Course activities – percent of the final grade - 50%</i>	<i>Practical activities – percent of the final grade - 50%</i>
<i>Final mark</i>	

Training Methods
<ul style="list-style-type: none"> <li>- <i>Lectures</i></li> <li>- <i>Independent Study</i></li> <li>- <i>Clinical stages</i></li> </ul>
Innovative Digital Training Methods
<ul style="list-style-type: none"> <li>- <i>Virtual laboratory</i></li> <li>- <i>Online platform</i></li> <li>- <i>E-learning</i></li> </ul>