ASCLS Continuing Education

Clinical Lab Investigations: Case Studies for the Lab Professional
Case set #1 – Immunology/Immunohematology

Final Quiz

Select the single best answer for each of the following multiple-choice questions and record on the answer sheet.

1. The decrease in FT_4 in this patient is due to an increase in which of the following:
    a. TSH.
    b. TPOAb.
    c. Total cholesterol.
    d. The patient's weight.

2. The Total Cholesterol was increased in this patient and should be considered as:
    a. directly related to her hypothyroidism, but not of concern.
    b. unrelated to her hypothyroidism and not considered further.
    c. directly related to her hypothyroidism and warrants intervention.
    d. unrelated to her hypothyroidism, yet significant, warranting intervention.

3. Thyroid autoantibodies present in patients with Hashimoto thyroiditis include all of the following EXCEPT
    a. anti-TSH receptor antibodies.
    b. anti-thyroid peroxidase antibody.
    c. anti-thyroglobulin antibody.
    d. anti-insulin antibodies.

4. Which of the following laboratory values should be monitored regularly in this patient in order to assess thyroid function?
    a. TSH.
    b. TgAb
    c. TPOAb.
    d. Total cholesterol.

5. What other condition should be considered in this patient with related laboratory testing performed regularly?
    a. Grave's Disease
    b. Rheumatoid Arthritis
    c. Coronary Artery Disease
    d. Systemic Lupus Erythematosus

6. A 65-year-old Caucasian female presented to her primary care physician with complaints of increasing weakness, fatigue, and shortness of breath. A CBC revealed a WBC of 72,000 and a differential that was 83% lymphocytes. The lymphocytes were described as being mature with tightly clumped nuclear chromatin. Based on this information, what is the MOST likely diagnosis?
    a. Acute lymphocytic leukemia
    b. Chronic lymphocytic leukemia
    c. Acute prolymphocytic leukemia
    d. Chronic prolymphocytic leukemia

7. A previously untransfused patient suffering from chronic lymphocytic leukemia was admitted to the hospital for transfusion due to a critically low hemoglobin and hematocrit. The direct antiglobulin test was 3+ and the indirect antibody screening test was 1+ at the antihuman globulin phase. Based upon this information, if the specificity can be determined, what is the MOST likely system specificity of the antibody involved?
    a. Rh
    b. Kell
    c. Kidd
    d. Duffy

8. When transfusing the patient with WAIHA, which of the following products should be chosen?
    a. Plasma expanders only
    b. Type specific whole blood
    c. O negative packed red blood bells
    d. Least-incompatible leukocyte-reduced RBCs

9. Elevation of which of the following pairs of chemistry tests would support a diagnosis of WAIHA?
    a. AST and ALT
    b. Bilirubin and LD
    c. AST and haptoglobin
    d. Bilirubin and haptoglobin

10. Which of the following potential findings would MOST likely be responsible for the presenting symptoms exhibited by this patient?
    a. Anemia
    b. Neutropenia
    c. Hypersplenism
    d. Presence of autoantibody

11. The positive immediate spin reactions on the antibody screening test and autocontrol in a previously untransfused patient with multiple myeloma are MOST likely due to:
    a. cold alloantibody
    b. warm autoantibody
    c. pseudoagglutination
    d. complement activation

12. Rouleaux formation in multiple myeloma patients results from:
    a. decreased antibody production
    b. decreased numbers of circulating red cells
    c. elevation of erythrocyte sedimentation rate
    d. elevation of globulins and fibrinogen in plasma

13. Which of the following abnormalities is MOST likely to be observed in previously untransfused multiple myeloma patients?
    a. Incompatible AHG crossmatch
    b. Warm autoimmune hemolytic anemia
    c. Discrepant forward and reverse grouping
    d. Positive antibody screen at AHG phase of testing

14. Resolution of the discrepant forward and reverse grouping results in this patient could BEST be accomplished by:
    a. incubating the reverse grouping tubes at 37^0C
    b. incubating the reverse grouping tubes at 4^0C
    c. washing the reverse grouping tubes with normal saline
    d. adding bovine serum albumin to the reverse grouping tubes

15. Which of the following laboratory results would LEAST likely be observed in patients with multiple myeloma?
    a. Hypercalcemia
    b. Hyperproteinemia
    c. Bence Jones proteinuria
    d. Polyclonal gammopathy

Record all answers on the answer sheet. Detach and mail or fax your answer sheet.
Faxed forms only accepted with credit card payment.
Send completed P.A.C.E.® evaluation form with payment to ASCLS to:

Sherry Miner
ASCLS PACE Coordinator
720 West Main
Rochester, IL 62563
Fax) 217- 498-2075

ASCLS Continuing Education Answer Sheet

Clinical Lab Investigations: Case set #1

Multiple Choice Questions

Circle the single best answer for each question:

1.	A	B	C	D
2.	A	B	C	D
3.	A	B	C	D
4.	A	B	C	D
5.	A	B	C	D
6.	A	B	C	D
7.	A	B	C	D
8.	A	B	C	D
9.	A	B	C	D
10.	A	B	C	D
11.	A	B	C	D
12.	A	B	C	D
13.	A	B	C	D
14.	A	B	C	D
15.	A	B	C	D

Mail or fax the completed answer sheet & P.A.C.E.® evaluation form to:
Sherry Miner
ASCLS PACE Coordinator
720 West Main
Rochester, IL 62563
Fax) 217-498-2075
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A certificate of 1.0 contact hours will be mailed to you upon successful completion of the quiz; a passing grade is 70% or better. P.A.C.E.® credits are accepted for continuing education requirements for maintaining certification by NCA & ASCP and for maintaining the licensure of laboratory professionals in the states of CA, FL, LA, MT, NV, RI and TN.

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PROGRAM EVALUATION

Professional Acknowledgment for Continuing Education
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Program/Session Title: CLI Case set #1 – Immunology/Immunohematology
Date Completed: **Program Number: 015-620-07**

Use this form to evaluate the above titled session. Circle the number (1-low, 4-high) to indicate your ratings of this program, objectives, and speaker; use one response per line. Please complete this form to fulfill the session requirements.

AUTHOR RATING	Low/Poor			High/Excellent		Not Applicable
To what extent: Did the author present knowledgeable, organized and concise case studies?	1	2	3	4	5	N/A
Did the author clarify and focus on the stated objectives?	1	2	3	4	5	N/A
Were the presentation methods & graphic information appropriate & effectively used?	1	2	3	4	5	N/A

OBJECTIVES RATING	Low/Poor			High/Excellent		Not Applicable
To what extent was each objective achieved?						
1: Identify and discuss common laboratory findings associated with Hashimoto Thyroiditis.	1	2	3	4	5	N/A
2: Identify and explain common hematologic and immunohematologic findings associated with CLL.	1	2	3	4	5	N/A
3: Identify and describe common findings and ABO discrepancies associated with multiple myeloma.	1	2	3	4	5	N/A

CONTENT RATING	Low/Poor			High/Excellent		Not Applicable
To what extent did the content relate to the case study objectives?	1	2	3	4	5	N/A
Rate the contribution of reading these case studies to your overall knowledge of this subject.	1	2	3	4	5	N/A
Rate your overall degree of satisfaction with this activity.	1	2	3	4	5	N/A
Rate your level of expertise in this subject prior to reading this case study.	1	2	3	4	5	N/A

Comments:

_____
_____
_____

Return completed form with answer sheet to: Sherry Miner, ASCLS PACE Coordinator, 720 West Main, Rochester, IL 62563; fax, 217-498-2075.