

BLOOD MODULE

CBL SEMESTER-I WEEK-02, (Batch 2016-17) SMC

CLINICAL CASE 1

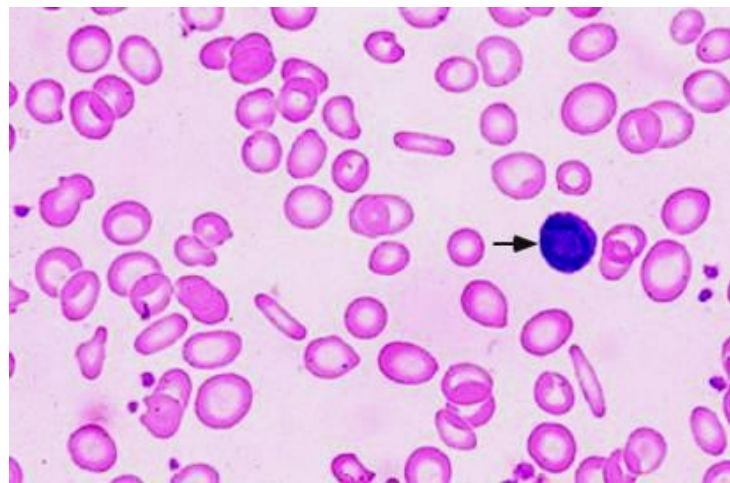
A 28-years-old professional lady, resident of Karachi, is in the first trimester of her first pregnancy. Though her pregnancy has been progressing uneventfully, recently she has noticed that she gets tired easily and is short of breath on even slight exertion. She also has experienced periods of light-headedness, though not to the point of fainting. Further she has noticed cramps in her legs, a desire to crunch on ice, and that her tongue has become sore. She is concerned so she makes an appointment to see her physician.

On examination the physician finds that her heart rate is 120/ minute, BP is 100/ 56mmHg, she has pallor, pale gums and nail beds. Given her history and the findings on her physical exam, the physician orders some blood tests. The results are shown below:

TABLE 1.COMPLETE BLOOD COUNT	
Red Blood Cell Count	3.5 million/mm ³
Hemoglobin (Hb)	6.7 g/dl
Hematocrit	23.3%
Mean corpuscular volume (MCV)	62fL
Mean Corpuscular Hb Concentration (MCHC)	30g/dl
Mean Corpuscular Hb (MCH)	19.0pg/cell
White blood cell count (TLC)	5,300/mm ³
Platelet count	5,50,000/ mm ³
Reticulocyte count	1.4%



Normal Peripheral film



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Abnormal Peripheral Film

Question:

- Q1. What can be cause of her symptoms?
- Q2. What are the abnormalities present in this CBC report?
- Q3. What do you mean by MCV, MCH, MCHC ?
- Q4. Why the reticulocyte count was advised?
- Q5. What type of anemia is she suffering?
- Q6. What are the causes of this type of anemia?
- Q7. What could be the most probable cause in this patient?
- Q8. What further tests would you advice?

Serum iron	20 μ gm/dL
Serum TIBC	534 μ gm/dL
Serum ferritin	10ng/dL

- Q9. What is the mechanism of iron absorption?
- Q10. What common mechanism can cause a woman aged 28 to become iron deficient?
- Q11. Which other test is important to find out cause of iron deficiency anemia?
- Q12. Which other disease mechanisms besides blood loss could lead to iron deficiency?
- Q13. What are the principles of treatment?
- Q14. How does the route of administration of iron influence the rate of Hb response?