



GENERAL EXAMINATION

4.1. Evaluation for Anemia

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Anemia is characterized by a deficiency in hemoglobin (Hb) level below the established normal range, dependent on the patient's age and gender (below 13.5 g/dL for men and below 12 g/dL for women). In pregnant women and children, anemia is defined by a Hb level lower than 11 g/dL. However, specific microcytic forms of anemia may exhibit reduced Hb level while maintaining a normal or even elevated red blood cell count, as seen in conditions like beta thalassemia minor. It's important to note that anemia itself is not an independent ailment; rather, it is a clinical indicator requiring thorough investigation into its root cause.

Pathophysiology

When evaluating the amount of hemoglobin in the blood, changes occurring in the plasma volume should also be taken into consideration. Conditions precipitating dehydration, such as severe vomiting, diarrhea, excessive diuretic use, burns, ileus, ileostomy, or fistulas, can obscure anemia and even induce relative polycythemia due to diminished plasma volume.

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References

1. Jameson L, Fauci A, Kasper D, Hauser S, Longo D, Loscalzo J (Eds). Harrison's Principles of Internal Medicine. (2018). 20e. McGraw-Hill.
2. Turner J, Parsi M, Badireddy M. Anemia. (2023) In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing.
3. Chaparro CM, Suchdev PS. Anemia epidemiology, pathophysiology, and etiology in low- and middle-income countries. (2019). *Ann N Y Acad Sci.* 1450:15-31.