

Hematologic Reference intervals for Healthy Adult Saudis in Riyadh Capital of Saudi Arabia

Abstract:

BACKGROUND: Laboratory hematological tests are widely used in clinical practice to assess health and disease conditions. Reference ranges provided by laboratory reports are considered the most authoritative medical tools to assist in the decision-making phase. International standards institutes recommend that reference ranges be established for each region. **OBJECTIVES:** Provide reference values of routine hematological parameters in Saudi adults according to age and gender. **DESIGN:** Cross-sectional. **SETTING:** Central province of Saudi Arabia. **PATIENTS AND METHODS:** Apparently healthy Saudi adults were subjected to laboratory testing of routine hematological parameters (full blood count, hemostatic profile, and serum hematinics), after completing a detailed health medical questionnaire. **MAIN OUTCOME MEASURES:** Hematological reference values based on the local population. **SAMPLE SIZE AND CHARACTERISTICS:** 637 after screening 827 potentially healthy Saudi adults with ages ranging from 15 to 65 years. **RESULTS:** The reference values of routine hematological parameters for the full population and by gender are presented with 90% CI as the lower and upper limits. Reference ranges mostly differed from universal established ranges shown in textbooks. **CONCLUSION:** The reference ranges of routine hematologic parameters for accurate assessment and appropriate management will help improve the routine clinical care of the adult Saudi population. **LIMITATIONS:** Difficulty in assessing health status of participants, who could have subclinical illnesses not reflected in the evaluated blood measurement. Lack of ability to eliminate individuals who might be carriers for haemoglobinopathies. Studies with larger sample sizes from different areas of the country are required to achieve a more accurate representation of the whole Saudi population. **CONFLICT OF INTEREST:** None.

Annals of Saudi Medicine, (2022), Vol 42 No 3: 191-203. 2/1/2022
DOI:10.5144/0256-4947.2022.191, ISSN: 02564947
