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The hemoglobin concentration and the platelet count of men and non-pregnant women living at high-altitude in Saudi Arabia; A comparative study.

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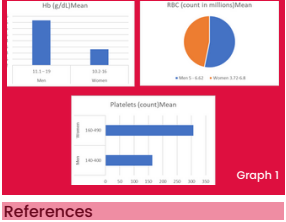
Background

High-altitude (HA)areas in different parts of the world recoded higher levels of RBCs and hemoglobin concentration which may results in health problems; however, some authors suggest a variation in the concentration level according to other factors rather than only high-altitude location. Platelets count also differs in the related studies; the platelet counts of healthy HA groups were lower compared with sea level control groups in several studies.

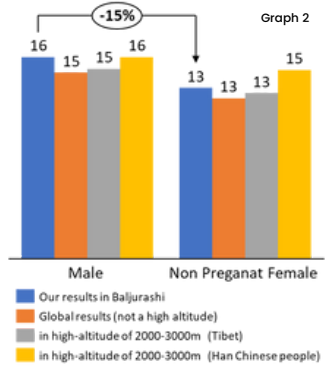
Objectives

This work aims to evaluate both hemoglobin concentration and platelet count in the population of high-altitude and population of areas at sea level on blood samples of healthy-looking people to assess if there is a difference between inhabitants in both areas regarding hemoglobin and platelets in order to render recommendations for people and health care administration



Results

The high-altitude residents includes men (40.6%) and (59.4%) non-pregnant men, hemoglobin level in adult males ranges from 11.1-19 g/dL with mean level 15.66, hemoglobin level in non-pregnant women ranges from 10.2-16 g/dL with mean level 13.3. Platelets count and RBCs are shown in graph 1. The hemoglobin level mean showed higher levels in comparison with the known global mean, see graph 2



Conclusion

Our results showed normal levels of platelet counts and high level of hemoglobin and RBCs raising the attention for healthcare stakeholders to implicate a clear policy for HA population's studies and follow up, also encourages researchers to evaluate the pathogenesis, risk factors and the appropriate preventive methods.

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