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The Proportion of Sickle Cell Disease in Pregnant Women at Al-Leith

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Abstract

This study was conducted in Al-Leith governorate among pregnant women to measure the proportion of sickle cell disease (SCD). Data about sickle cell disease (SCD) among pregnant women in AL-Lith during the year 2019-2020 were collected by distribute questionnaires in hospitals in AL-Leith province. The proportion of Anemia in pregnant women was 2.5%. the study concluded that the proportion of such anemia is still high. The study concluded that sickle cell anemia is one of the most common autosomal recessively inherited blood disorders in Al-Leith is sickle cell anemia. This condition might be related to consanguinity.

Keywords: epidemiology, sickle, anemia, pregnant, Al-Leith

INTRODUCTION

Sickle cell anemia is an autosomal recessive disorder characterized by production of abnormal hemoglobin S and is associated with high morbidity and mortality (Wasil, 2011). Inheritance of mutant hemoglobin genes from both parents causes sickle-cell anemia, also known as sickle-cell disorder or sickle-cell disease, which is a common hereditary ailment. These hemoglobinopathies, which mostly include thalassemias and sickle-cell anemia, are widespread. Haemoglobinopathies are caused by genes that are carried by about 5% of the world's population. According to WHO estimation around 300 000 newborns are diagnosed with serious hemoglobin abnormalities each year; more than 200 000 of these instances are sickle-cell anemia in Africa. Globally, carriers (i.e., healthy individuals who have only one mutant gene from one parent) of thalassaemia outnumber carriers of sickle-cell anemia, however specific regions with a high prevalence of the sickle-cell gene experience a high proportion of affected births. Sub-Saharan Africa is the region that is most affected by sickle cell anemia (SCA), a serious public health issue that affects the entire world. Nearly a quarter of a million new births every year, or more than three out of four of those impacted globally, occur here (Alex, 2017). In Saudi Arabia, adults have a prevalence of SCA of more than 45,100 per 1,000,000. In addition, it was projected that 2400 Saudi children and teenagers out of 1,000,000 had sickle cell disease. In the country's eastern and southwest regions, SCA predominates more (Bin, 2023).

MATERIALS AND METHODS

The study was setting-based descriptive study conducted in hospitals in Al-Leith province. The relevant data were collected using records and questionnaire. People with sickle cell anemia were already diagnosed by physicians and laboratory examinations. Total of 200 individuals were selected using simple random sampling and collected data were analyzed using SPSS software package.

RESULTS

Table (1): The characteristics of participants

Age years	No	%
20 - 29	75	37.5
30 - 39	91	45.5
40 - 49	32	16
≥ 50	2	1
Total	200	100
Educational level		
Primary	17	8.5
Intermediate	3	1.5
Secondary	38	19
University	142	71
Total	200	100
Nationality		
Saudi	199	99.5
Non-Saudi	1	0.5
Total	200	100

Table (2): The proportion of sickle cell anemia

Sickle cell anemia	No	%
+ ve	5	2.5
- ve	195	97.5
Total	200	100

The above table illustrated that the proportion of sickle cell anemia was 2.5% out of 200 people participated in the study

DISCUSSION

Red blood cells have a sickle or crescent form, and anemia refers to a lack of blood, hence the name sickle cell anemia. Millions of people worldwide suffer from sickle cell anemia. In this study we found that the proportion of sickle cell anemia in Al-Leith province, Saudi Arabia was 2.5%, it is known that the disease is frequent in western region of the kingdom as the disorder is hereditary disease and the consanguinity marriage is prevalent. In a study conducted on epidemiology and characteristics of sickle cell patients admitted to Hospitals in Jazan region, Saudi Arabia, sickle cell anemia was found in 22.6% of participants (Hazzazi, 2020). The findings of many

research indicate an increase in the prevalence of sickle cell disease in Saudi Arabia, particularly in the eastern and southern regions of the country.

Children who are at risk for problems should receive the appropriate vaccines and blood transfusions. Programs for newborn screening for sickle cell disease should be taken into consideration. Instead of conducting a general screening, it would be more suitable to focus on screening children who are at risk or who have a history of consanguinity between their parents (Nazim, 2021).

CONCLUSION

The study concluded that sickle cell anemia is one of the most common autosomal recessively inherited blood disorders in Al-Leith is sickle cell anemia. This condition might be related to consanguinity.

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