



Prevalence of Anaemia amongst non-pregnant women in Sirte at Ibn-Sina hospital over a period of ten years (2010-2020)

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ABSTRACT

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Anaemia, non-pregnant, Sirte,
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Background: The World Health Organization (WHO) has reported that in 2019, 30% (539 million) of non-pregnant women were affected by anemia, with the highest prevalence in sub-Saharan Africa and Asia. Anaemia remains a major public health concern in developing countries, as it can affect individuals at any stage of life. The symptoms of anaemia are non-specific and can lead to reduced physical work capacity and productivity.

The aim of the study is to estimate the prevalence of anaemia in non-pregnant women residing in Sirte City.

Methods: This is a retrospective observational study that took place at Ibn Sina Teaching Hospital in Sirte, Libya. The study included all case records of women above the age of 15 years who were admitted to the female medical ward at the hospital in the period between 2010 and 2020.

The data was examined using Microsoft Excel 2019 and presented in tables and graphs.

Results: The case records of 773 cases were reviewed and analyzed. The results revealed an estimated anemia (Hb <12g/dl) prevalence of 14.7% (114/773), the mean age of patients was 55 years and the mean Hb was 6.5 g/dl.

Conclusion:

The study showed that anaemia is prevalent in the admitted female population in the city of Sirte and a notable increase was noted in the last year of the study that could reflect capturing the real prevalence; this must be confirmed in subsequent studies that would also help in identifying risk factors and causes in this female population.

Introduction:

Anaemia is defined as the state at which haemoglobin (Hb) and haematocrit (Hct) levels fall under the indicated referenced cut-off points depending on age, gender, and altitude. [1,2] In developing countries, anaemia is one of the major public health problems because it can occur at all stages of life. Anaemia is a multifactorial disease that can be both a risk factor and a consequence of diseases that may affect the nervous system, respiratory and circulatory systems, skin mucous membrane, digestive

Material and Methods:

system, endocrine system, etc... The symptoms are nonspecific and are clinically detectable only when the anaemia is moderate or severe. [3] WHO reported that 539 million (30%) of non-pregnant women are affected by around the world [1, 3, 4]. This study aims to assess the prevalence of anaemia among non-pregnant women in the study area by reviewing and analyzing the data in case records of women admitted over a 10-year period between 2010 and 2020.

We conduct a retrospective observational study at Iben Sina Teaching Hospital in Sirte, Libya. A total of 773 patients' complete case records were reviewed. However, missing data and missing case

Results:

We identified 114 cases where anaemia (Hb < 12g/dl) was the main cause of admission out of the 773 reviewed case

records in the years 2016 and 2017 precluded their inclusion.

The data was collected and analyzed using Microsoft Excel 2019. and presented in tables and graphs.

records revealing an estimated prevalence of anaemia of 14.7%. The mean age of the cases was 55 years (Table 1). The mean haemoglobin (Hb) level on admission was 6.5 g/dl (Table 2).

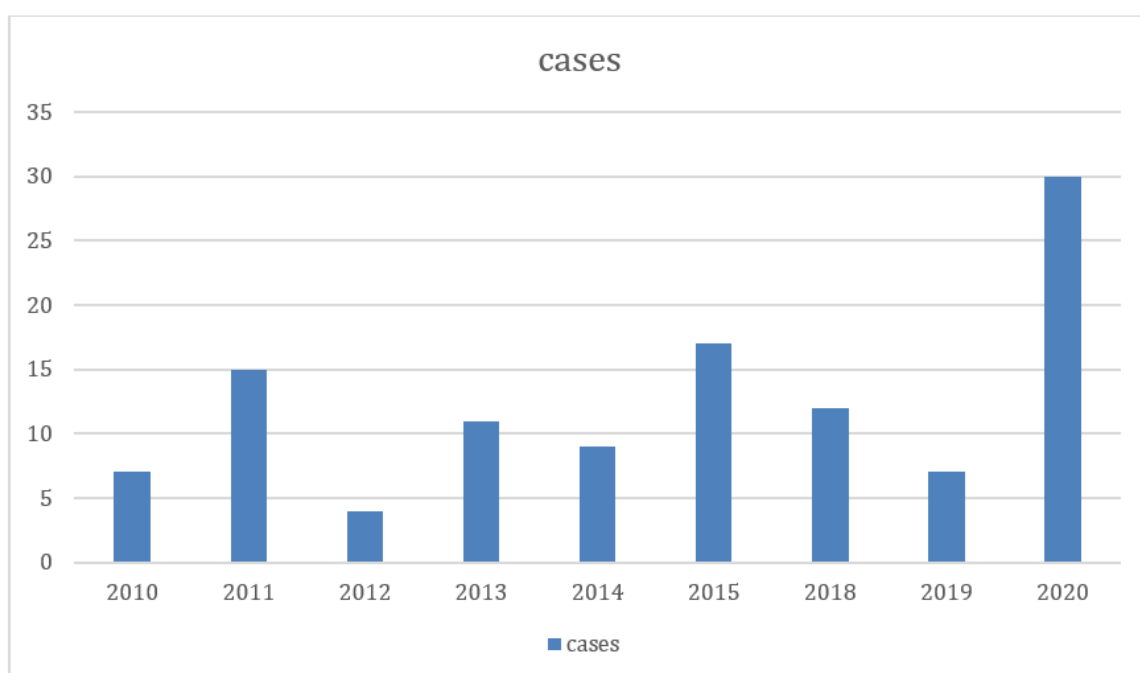


Fig1. Distribution of cases according to years.

Age group	Number of cases
15-20	16
21-30	13
31-40	12
41-50	16
Above 50	57

Table1: Distribution of cases according to age group

Hb concentration	Number of cases
(3.5-5)	5
(5.5-7.5)	30
(8-10.5)	77
(11-11.3)	2

Table 2: Distribution of cases according to Hb concentration

Discussion:

The WHO 2011 report showed that the prevalence of anaemia in women in the reproductive age group was 29.4% (95% CI: 24.5–35.0%) with Africa having the highest prevalence at 37.6%, while North America had the lowest at 12.4%. Asia had a prevalence of approximately 31.9%. Other studies from China, Ethiopia, and India showed that the overall prevalence of anaemia ranged from 15.4% to 35.6% (5-8). In comparison, this study revealed a lower overall prevalence of anaemia (14.7%).

Furthermore, the prevalence of anaemia in our study is lower than the 2019 World Bank's

Based on the findings of this study, it can be concluded that Anaemia is still a prevalent health concern among non-pregnant females in the city of Sirte, Libya. Furthermore, the prevalence of Anaemia

collection of development indicators, which reported a prevalence of 29.9% in Libya [9]. Although this study revealed a notable increase in anaemia prevalence amongst admitted women in the last year of the study. This increase could be due to completeness of data collection and in fact may reflect the true prevalence figure.

In addition, the study found the mean Hb concentration amongst the admitted women to be 6.5 g/dl. with the highest prevalence found in the age group above 50 years.

Conclusion:

has notably increased over the last year of the study, however, our findings must be confirmed in larger studies to see if the pattern of anaemia prevalence is changing and to explore the risk factors involved.

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