

Chapter Two

Materials and Methods

2.1 Study design

This was case control study conducted during the period from July to November 2015.

2.2 Study area

Samples were conducted in Al-Mokhtabar Medical Laboratory at Bahri locality.

2.3 Study population

The study was included 160 samples, eighty (80) Sudanese health pregnant women at the first trimester and eighty (80) non pregnant women.

2.3.1 Inclusion Criteria

Sudanese pregnant women at first trimester with different age ranged from 17 – 41 years and approved to participate in this study were included.

2.3.2 Exclusion Criteria

Pregnant women at second or third trimester and pregnant women at first trimester with diseases that may affect CBC such as Malaria, Typhoid fever, previous history of anemia were excluded.

2.4 Method of data collection

A direct interviewing questionnaire was used to obtain demographic and clinic data including age, number of pregnancies, stage of trimesters, usage of supplement, history of abortion, presence of disease during pregnancy and whether they visit antenatal clinics regularly.

2.5 CBC determination

Full automated cell counter "Sysmex XS800i".

2.6 Blood test and procedure

2.6.1 Specimen collection

Three ml venous blood was collected in EDTA container from all participants and CBC was collected, well mixed and examined within 2 hrs at room temperature 37°C.

2.6.2 Requirements

- 1- Automated Hematological analyzer Sysmex XS 800i.
- 2- EDTA containers(vacuotainer).
- 3- Cotton, Sprit, Blister and Tourniquet.

2.7 Quality Control

Commercial control blood was used and analyzed using X-bar control and L-J (Levy-Jennings) Control programs.

2.8 Ethical consideration

The study was approved by Medical Laboratory College Committee – SUST. Written consent was obtained from the participants after they had been informed with the objectives, benefits and expected outcomes of the study. The participants were assured that the collected information will be kept confidential and will not be used for any other purpose other than this study.

2.9 Statistical analysis

Statistical Package of Social (SPSS) software program for windows version XP was used for statistical analysis, independent T-test and one way nova were used to obtain P- value significant level was set at ≤ 0.05 .

