Plasma Fibrinogen Level in Normal Pregnant Sudanese Women
Abdelrahman Mohamed Sidahmed1,*, Mutaz Ibrahim Hassan2 and Maha Mohammed Omer3
1Faculty of Medical Laboratory Sciences, University of Al-neelain, Sudan.
2Faculty of Medical Laboratory Sciences, Department of Clinical Chemistry, University of Shendi, Sudan.
3Faculty of Medicine, University of Shendi, Sudan.

ABSTRACT
The parity is the number of times that she has given birth to a fetus with a gestational age of (24) weeks or more, regardless of whether the child was born alive or was stillborn. The aim of this study is to shed more light on the role of effect parity on fibrinogen level. The study of outcomes of previous pregnancies gives some indication of the likely outcome and degree of risk with the current pregnancy. From the previous studies the multiparity will also influence the risks associated. The parity is the number of times that she has given birth to a fetus with a gestational age of (24) weeks or more, regardless of whether the child was born alive or was stillborn. The study of outcomes of previous pregnancies gives some indication of the likely outcome and degree of risk with the current pregnancy. From the previous studies the multiparity will also influence the risks associated.

Materials and methods
Study design
Cross-sectional study conducted at Algazera & Khartoum states during the period October to November 2015. (120) normal pregnant women with age ranging (20 – 42) years, classified as (60) non-pregnant women (nulliparas) as control group, (30) multiparae and (30) grand multipara’s. The concentration of fibrinogen in the multiparae mean (6.20) as compared to (8.52) mg/dl in the control group (P.value 0.266) was insignificant, Grand multipara mean (3.77) as compared to (8.52) mg/dl in the control group (P.value 0.015) were significantly decreased compared to control. Normal pregnant multipara and grand multipara women fibrinogen levels are lower than in aged matched with non-pregnant women. These changes are not directly associated with lipid metabolism during pregnancy. (8).

Keywords
Parity – C-Reactive Protein (CRP), Fibrinogen.
plastic pipette and stored in plastic tube used to measure fibrinogen and CRP.

**Ethical consideration**

Ethical consideration was taken verbally. This study posed no physical risk to participants though an interview of (10) min, might have been convenient to some participants. It is a convenient study, thus neither the participants name nor his institution in use in any of the study materials and each participant was assigned a unique identification number. Collected data will be secured in a computer protected by password.

**Measurement of fibrinogen**

Fibrinogen level was determined by using fibrinoquant kit utilizes the Clauss clotting time method (by using coagulometer) for the determination of plasma fibrinogen levels. Wherein excess bovine thrombin is used to clot diluted plasma. First, standard curve is prepared using fibrinoquant Standard, reference plasma of known fibrinogen content, at dilutions of (1/5, 1/10, 1/20 and 1/40). When thrombin is added, the clotting time obtained is inversely proportional to the fibrinogen content. Patient plasma, at dilution of (1/10), is clotted with thrombin and the resultant clotting time is used to interpolate fibrinogen level from the standard curve.

**Statistical analysis**

All data was analyzed using statistical analysis software (SPSS) version (16). Statistical analysis included description statistic of mean and standard deviation.

**Result**

Table 1. Concentration of fibrinogen level in multiparas versus control group.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Case Mean ± SD</th>
<th>Control Mean ± SD</th>
<th>p.value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibrinogen</td>
<td>6.20 ± 3.99</td>
<td>8.52 ± 7.05</td>
<td>0.266</td>
</tr>
</tbody>
</table>

Result expressed as mean ± SD
Significant different consider as p.value ≤ 0.05

Table 2. Concentration of fibrinogen level in grand multiparas versus control group.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Case Mean ± SD</th>
<th>Control Mean ± SD</th>
<th>p.value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibrinogen</td>
<td>3.77 ± 2.47</td>
<td>8.52 ± 7.05</td>
<td>0.015</td>
</tr>
</tbody>
</table>

Result expressed as mean ± SD
Significant different consider as p.value ≤ 0.05

**Discussions**

This study revealed that there are significant decrease in mean concentration of fibrinogen level in patient with grand multiparas in comparison with control group with p.value (0.015) this finding agreed with previous study which report, of the department of obstetrics and gynecology, king Abdul-Aziz university hospital a retrospective analysis of (646) arab grand multipara’s who booked for hospital confinement between 1983 and 1985 was carried out. The result was compared with that of non-grandmultiparas during the same period. In the grand multiparas, the incidence of gestational diabetes, hypertension rheumatic heart disease, antepartum, postpartum, hemorrhage and macroscopic infants were increased. However, contrary to some previous reports, the incidence of anemia, cesarean sections induced labor, dysmaturity and prenatal deaths were decreased. This is thought to be due to the provision of modern specialist prenatal care and improve socioeconomic standard.

The present study revealed that, there was insignificant difference between mean fibrinogen level in multiparas compared with control group with (p.value 0.266).

**Conclusion**

Normal pregnant multipara and grand multipara women fibrinogen levels are lower than in aged matched with non pregnant women. These changes are not directly associated with lipid metabolism during pregnancy.

**References**

7. Choi JW, Pai SH (2007) Tissue plasminogen activator levels change of Clinical Pathology, College of Medicine, Inha University Hospital Shinheung-dong, pp 400-103, Republic of Korea