



شبكة المعلومات الجامعية

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# شبكة المعلومات الجامعية

## التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأفلام قد اعدت دون أية تغيرات



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# بعض الوثائق الأصلية تالفة



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بالرسالة صفحات  
لم ترد بالأصل

**STUDY OF PLASMA ENDOTHELIN-1 IN  
PRE-ECLAMPTIC AND GESTATIONAL  
DIABETIC PATIENTS**

**Thesis**  
**Submitted Partial Fulfillment of the Master Degree in  
Obstetrics and Gynaecology**

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B.V.M.O

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ اقْرَأْ وَرَبُّكَ الْأَكْرَمُ الَّذِي عَلَّمَ

بِالْقَلَمِ عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ ﴾

صَدَقَ اللَّهُ الْعَظِيمُ

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# INTRODUCTION

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## INTRODUCTION

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Pre- eclampsia and Diabetes mellitus are two of the common medical complications occurs during pregnancy .

Pre eclampsia is a fascinating disease , the aetiology of which has remained elusive for centuries.<sup>(1)</sup> Many theories were claimed to be a cause of pre-eclampsia .

Cooper and liston<sup>(2)</sup> examined the possibility that susceptibility to pre eclampsia is dependent upon a single recessive gene . Dietary deficiency especially for calcium has been suspected as a cause of pre eclampsia <sup>(3)(4)</sup> .

Prostaglandins are implicated in the causation of pre-eclampsia . Prostacyclin (  $\text{PGI}_2$  ) ; the vasodilating factor may account for haemodynamic changes in pregnancy while increase of " Thromboxane  $\text{A}_2$  " as a vasoconstrictor , and platelet aggregating factor is seen in preeclampsia . <sup>(1)</sup>

Endothelins are claimed in the causation of pre-eclampsia where higher levels were reported in pre-eclamptic women . <sup>(5)(6)</sup>

Diabetes mellitus is primarily a disturbance of carbohydrate metabolism characterised by hyperglycemia  $\pm$  glycosuria , with secondary disturbance of protein and fat metabolism . Microangiopathy is wide - spread , but is more

prominent in the retina , glomeruli and vasa nervosa .The vast majority of cases are idiopathic ( primary diabetes ) and the minority are of known aetiology ( secondary diabetes ) .<sup>(7)</sup>

### **Hereditary**

The mode of inheritance is not precisely known and several genes are probably involved . In genetically predisposed persons , precipitating factors such as obesity , pregnancy , trauma , shock and infection , can precipitate diabetes .<sup>(8)</sup>

### **Drugs**

Also certain drugs may precipitate diabetes such as corticosteroids , thiazide , thyroid hormone , diazoxide .<sup>(9)</sup>

### **Obesity**

Obesity itself result in some degree of insulin resistance . Plasma insulin level is higher in obese as compared with normal people suggesting defective insulin utilization and reverts to normal level after weight reduction .<sup>(10)</sup>

Pregnancy complicated by diabetes mellitus represents a therapeutic challenge to physicians , patients , and health care professionals alike.<sup>(9)(10)</sup>

Pregnancy can precipitate and aggravate already existing

diabetes due to presence of human placental lactogen , which is similar to growth hormone , and has antagonistic action to insulin . <sup>(11)</sup>

A significant increase in the maternal circulating plasma concentrations of cortisol , another counter regulatory hormone ; is also observed during gestation . <sup>(12)</sup>

Elevated estrogen , progesteron and prolactin concentrations may also worsen insulin sensitivity during pregnancy . <sup>(13)</sup>

Other contributing factors include increased body weight and adibosity , increased caloric intake , and decreases in physical activits , each of which may impair insulin sensitivity <sup>(14)</sup> .

Plasma endothelin levels donot change with advancing gestational length . During normal pregnancy , the endothelin - 1 / big endothelin - 1 ratio decrease , indicating a suppressed converting enzyme activity or altered clearance of endothelin - 1 . <sup>(15)</sup>

Pregnant women with insulin dependant diabetes mellitus have markedly elevated endothelin -1 levels . <sup>(16)</sup>