SUMMARY AND CONCLUSION

Summary:

Adrenomedullin is a 52 amino acid peptide originally isolated from human pheochromocytoma in 1993. It was initially demonstrated to have profound effects on the vasculature including vasodilatation and subsequently promotion of angiogenesis. Since then it has become apparent that it has a wide range of other biological actions including regulation of cell growth and differentiation ***(Wilson et al., 2004).***

Preeclampsia is a serious pathological condition that affects 5-10% of all pregnancies and is a leading cause of maternal and fetal morbidity and mortality. This condition is best descried as a pregnancy – specific syndrome of reduced organ perfusion secondary to vasospasm and endothelial activation. Proteinuria is an important sign of preeclampsia ***(Newman et al., 2003).***

This work aimed at studying of plasma level of adrenomedullin (AM) in normal pregnancy and preeclampsia and whether maternal AM values in women with preeclampsia are different from those in normotensive pregnant women.

The present study was carried out on 90 women attending the antenatal clinic in Benha University Hospitals.

The study included 4 groups:

Group I (45 women): Normotensive pregnant women at first-trimester, second-trimester and third-trimester.

Group II (15 women): Pregnant women with preeclampsia at 25 to 38 weeks of gestation.

Group III (15 women): Healthy non-pregnant women.

Group IV (15 women): Hypertensive non-pregnant women.

All women in the study were subjected to full history taking, general and abdominal examination, urine examination and transabdominal ultrasound for pregnant women.

Plasma AM concentration were measured for all women by using enzyme immunoassay kits.

The results of the work can be summarized as follows:

- Plasma AM levels in pregnant women with normal blood pressure at different gestational ages (first, second and third trimesters) were significantly higher than those detected in non-pregnant normotensive women.
- Plasma AM levels were significantly increased with increasing gestational age in pregnant women with normal blood pressure.
- Preeclamptic women had the highest mean plasma AM levels compared with normotensive pregnant women at different gestational ages, normotensive nonpregnant and hypertension non pregnant women.
- Non pregnant women with hypertension had significantly higher plasma AM concentration compared with normotensive non pregnant women.

Conclusion:

From the present study, it was possible to conclude that:

- Maternal plasma AM concentration increases throughout pregnancy and increases as gestational age progresses.

- AM production starts very early in gestation, suggesting that it may have an important role in human reproduction, from implantation to delivery.
- Maternal plasma AM level in preeclampsia appears to be higher than in normal pregnancy and may plan an important role in its pathogenesis.

Recommendations:

- Further studies are required to clarify the role of AM in the pathophysiological characteristics of normal pregnancy and pathogenesis of preeclampsia.
- AM may be used in the future as a biomarker in preeclampsia, however many studies are needed to confirm this.