

**FOETOMATERNAL ENDORPHINS IN NORMAL PREGNANT
WOMEN AND IN PRE-ECLAMPTIC PATIENTS**

Submitted By

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UNDER SUPERVISION

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

« وَقُلِّدْ رَبِّ نَزْدِي عِيْلًا »



Dedicated To
My Parents and Husband
With All Affection And Respect

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Introduction

AND AIM OF WORK

INTRODUCTION

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Early observations that the mammalian brain contained opiate receptors led to the discovery of a class of peptides now known as endogenous opiates, or the endorphins. (Kosterlitz and Paterson 1981).

β -endorphin is a 31 aminoacid C-terminal segment of a larger molecule called β -lipotropin

Tyr - Gly - Gly - Phe - Met - Thr - Ser - Glu - Lys - Ser -
Gln - Thr - Pro - Leu - Val - Thr - Leu - Phe - Lys - Asn -
Ala - Ipe - Ile - Lys - Asn - Ala - Tyr-Lys - Lys - Gly - Glu.
(β -lipotropin molecule) (Larsen et al., 1981)

While there is no proven clinical use for beta-endorphin measurement, β -endorphin has been shown to possess very potent analgesic activities. (Raisanen et al., 1984).

Yen et al., (1985) added that there is other pharmacologic properties associated with β -endorphin. Those are induction of

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catalepsia, hypothermia, sedation and excessive grooming behaviour. These effects are blocked by the opiate antagonist Naloxone (Levine et al., 1978).

Raisanen et al., (1984) reported that plasma concentrations of β -endorphin are higher in pregnant than in normal non-pregnant women, and increase further during labor.

In addition to the pituitary gland, placental tissue has been shown to contain β -endorphin. (Liotta et al., 1982).

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AIM OF THE WORK
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Determination of β -endorphin immuno-reactivity levels in the maternal and cord blood, in normal pregnant women and in preeclamptic patients. And to find any possible relation between β -endorphins and the syndrome of preeclampsia.

The results obtained are compared with those of previous studies in a critical way.

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Review of Literature

THE BETA-ENDORPHINS

Definition:-

β -endorphin is an independent peptide present in the circulation of the man (Nakao et al., 1979), and it is the most potent known naturally occurring analgesic agent. (Loh et al., 1976).

Distribution and biosynthesis:-

β -endorphin is an opioid peptide formed of 31-amino-acid residues (Bradburg et al., 1976; Loh et al., 1976).

The highest concentrations appear to be in the hypothalamus (Bloom et al., 1978) and the pituitary (Guillemin et al., 1977).

β -endorphin has been detected in human placenta (Fraiola and Genazzani, 1980) and in placental tissue fluid. (Kimball et al., (1981).

Also, Evans et al., (1985) noted that the opioid peptide is present in the newborn infant and in the fetal circulation.

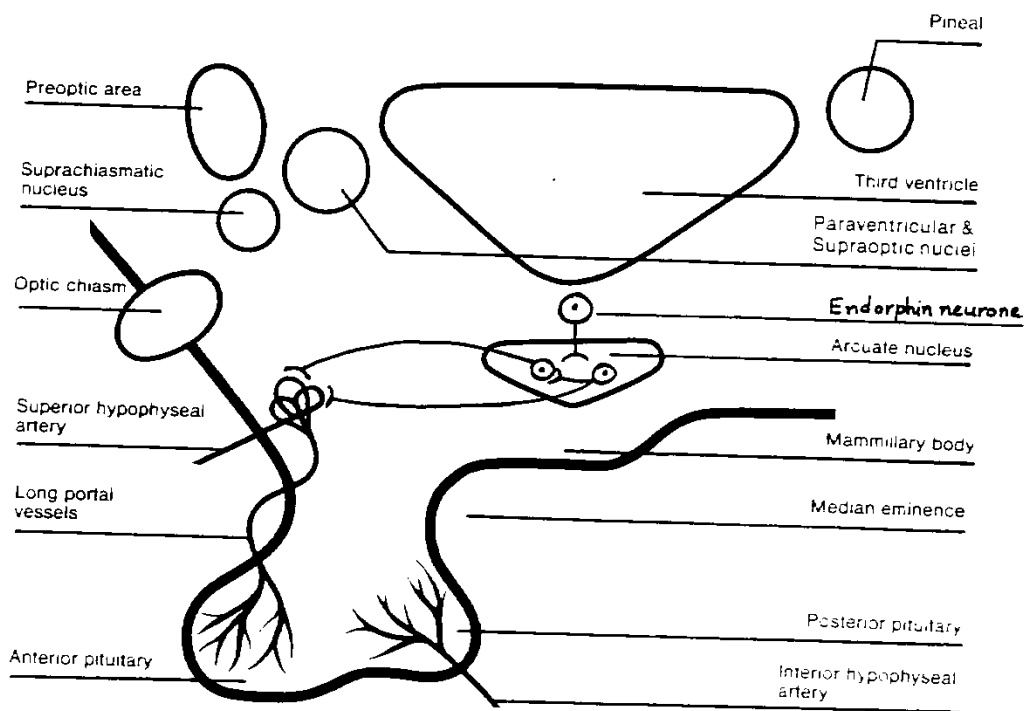


Fig. (1): The hypothalamus and the pituitary.

(Speroff et al., (1983). p. 53).