This study was designed to determine the role of histamine in the level of some secretions of anterior pituitary gland in male rate and to inrestigated the types of receptors by which the histamine exerts its effects on the secretion of hormones, besides, knowledge the effect of some blockers of histamine´s receptors in secretion of those hormones.

In this study histamine was used in adose of 5 mg/kg, chlorpheneramine (H1 blockor) in adose of 10 mg/kg and cimetidine (H2 blocker) in adose of 80 mg/kg. All these drugs were injected intraperitoneally, the study included 3 experiments as :

1- Acute effect of histamine in the level of some anterior pituitary gland secretions:

In this experiment the animals were divided into four groups (n=6) , In the first group , blood samples were collected after 10 minntes from D.W. injection (control group) , while the second , third and fourth groups were injected with histamine and blood sample were collected after 10,20,30 minntes of histamine injection respectivily .

2- Determination of the receptor by which histamine exerted its effects:

The animals of this experiment were divided into three groups (n=6). The first group (control group) was injected with D.W. , 30 minutes later was injected with histamine , blood samples were collected,30 minntes after histamine injection . In the second and third groups histamine was injected after 30 minutes of injection of H1 and H2 blocker respectivily ,30 minutes later , blood samples were colleled for hormones estimation.

A

3- Effects of histamine receptors blockers on the secretion of anterior pituitary:

The animals of this experiment were divided into three groups(n=6) . They were injected with D.W. , H1 and H2 blocker respectivily and blood sample were collected 30 minutes later .

The study was shown that :

1- Histamine exerted stimulatory effect on the secretion of LH, and ACTH via H1 and H2 receptor and on prolactin secretion via H2 receptors. However, the effect of histamine on TSH secretion is inhibitory via H2 receptor, while it exerted no effects on FSH secretion .

2- Injection of H1 blocker alone caused insignificant decline in LH level. However, it caused significant ($p<0.05$) decline in the levels of ACTH , and caused significant ($p<0.05$) increase in the levels of FSH . It exerted no effects on the secretion of prolactin and TSH. On the other hand , H2 blocker caused significant inhibition ($p<0.05$) in the secretion of LH and prolactin, and caused significant ($p<0.05$) increase in the levels of TSH. However, the decline in the level of ACTH was insignificant, and H2 blocker had no effects on FSH secretion .

As a conclusion , histamine had a regulatory role in the secretion of some hormones of anterior pituitary gland in the male rats. It exerted this role either indirectly via stimulation or inhibition of the hypothalamic stimulatory or inhibitory factors because of the concentration of histaminergic cell in hypothalamic areas, or the effect may exerted via its direct stimulation or inhibition of hormones and neuroactive substances which mediated histamine action and probability occurring interpenetrate actions of other brain neurotransmitters with histamine action .