R E S U L T S

1- Effect of Morphine on Isolated Gravid Rabbit Uterus :

Morphine in doses of 0.5 , 1 , 2 and 4 ug / ml produced a dose - dependent stimulant effect on the isolated gravid rabbit uterus . It increased the tone as well as the height and frequency of uterine contraction .

The effect was reversed by repeated washing of the preparation . The stimulant effect started at a dose level of 0.5 ug / ml and was maximal at 2 ug/ml (Figure 3) .

The relation between the dose of morphine expressed on logarithmic scale and percentage increase in height of uterine contraction is shown in figure (4) .

The effect of morphine on contractility was found to be statistically significant at all tested dose levels except at 0.5 ug / ml (Table 1) .

On the other hand, statistical analysis of data revealed that morphine has insignificant effect on the frequency of contraction of gravid rabbit uterus (Tab. 2).

Site of action of morphine on isolated gravid rabbit uterus :

An attempt was made to investigate the mechanism of the stimulant effect of morphine on the isolated gravid rabbit uterus . It was found that this stimulant effect was not abolished after blockade of the choli - nergic receptors by atropine (1 ug / ml) (Figure 5) . On the contrary, the effect was abolished after blockade of alpha - adrenergic receptors by phentolamine (10 ug/ml) (Figure 6), indomethacin (2 ug / ml) (Figure 7) and naloxone (30 ug / ml) (Figure 8) .

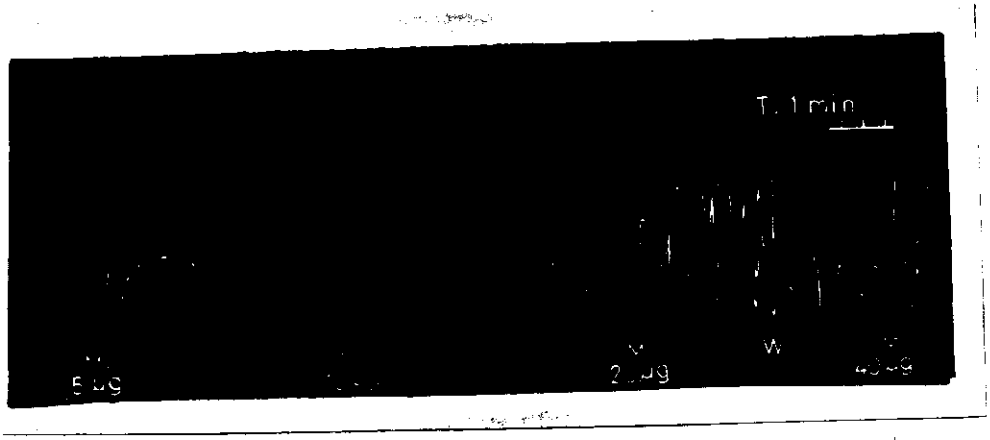

Figure (3): Effect of morphine on isolated gravid rabbit uterus .

Morphine in doses of 5 , 10 , 20 and 40 ug / 10 ml bath produced dose - related stimulation of the prepara - tion . It increased the tone as well as the height and frequency of contraction . The effect was reversed by repeated washing of the preparation .

M = Morphine .

W = Wash .

T = Time marker .

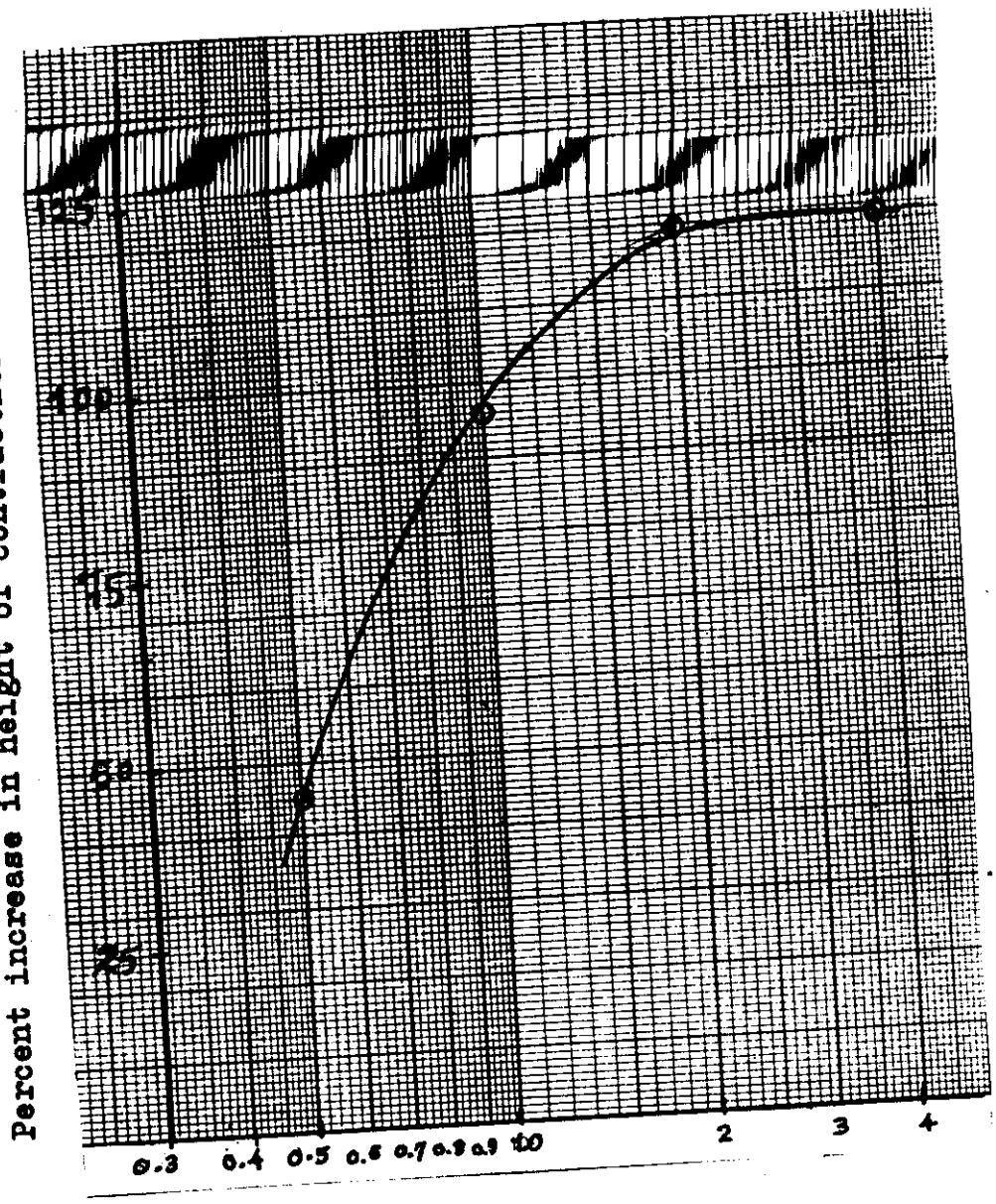

Fig.(4): Effect of Morphine on contractility of isolated gravid rabbit uterus .

* Each point represents the average of five experiments .