

P7: Effect of Carob (*Ceratonia siliqua L*) male flower on the ovulation in mice

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Introduction

Mice are an important model species for studying the genetic bases of fertility (Groszer et al. 2008; Jamain et al. 2008). The regulation of estrous cycle in mice is a complex process, and vaginal smear has always been used as an index of ovarian activity, which is a simple technique that can be used by practitioners to help characterize stages of the reproductive cycle (Abel MH., et al 2000; Halpin DM., et al 1986; Yokota H. et al 1997). Due to traditional activity visiting Carob tree (*Ceratonia siliqua L.*) within November and December by women will enhance ovulation and fertility. This period is the time of male trees spores' production. In this study we investigated the effect of the male spores on the estrous cycle regulation and baby production in mice.

Materials and methods

Carob male flowers were collected in November and December 2009 from mountains around Jenin city, dried and grinded. Water-ethanol (W-E) extraction was made and stored at 4C until use. Female BALB/C mice (2 months old) were divided into three groups with 5 mice each. Two groups were exposed to either flower untreated flower powder or nasal exposure to flower water-ethanol extraction for one week and one group kept as a control. Vaginal wash with saline taken every day for two weeks, then mature males were introduced to them and babies number were collected after 25 days.

Results

Estrus cycle can be divided into four stages: proestrus, estrus, metestrus, and diestrus and the duration of the estrous cycle are 4-5 days and estrus itself lasts about 12 hours, occurring in the evening. Both the pure powder and the

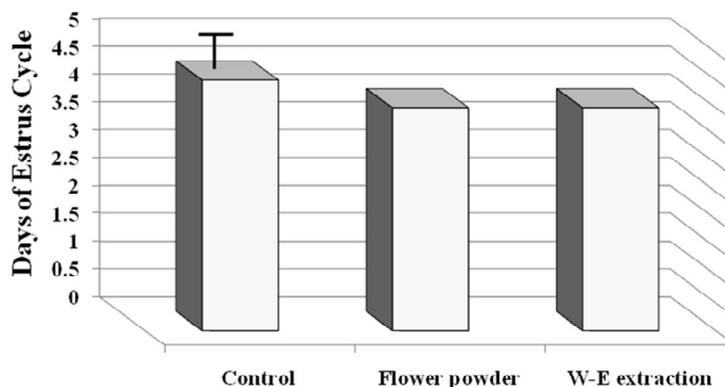


Fig.2 Duration of the estrus cycle within the control, flower powder and W-E extraction treated groups.

W-E extraction showed a regular estrus cycle for the two weeks compare with variation with the control group which showed a variation between 4 to 5 days with 4.5 days average

(Fig.1).
powder
babies. An
babies with

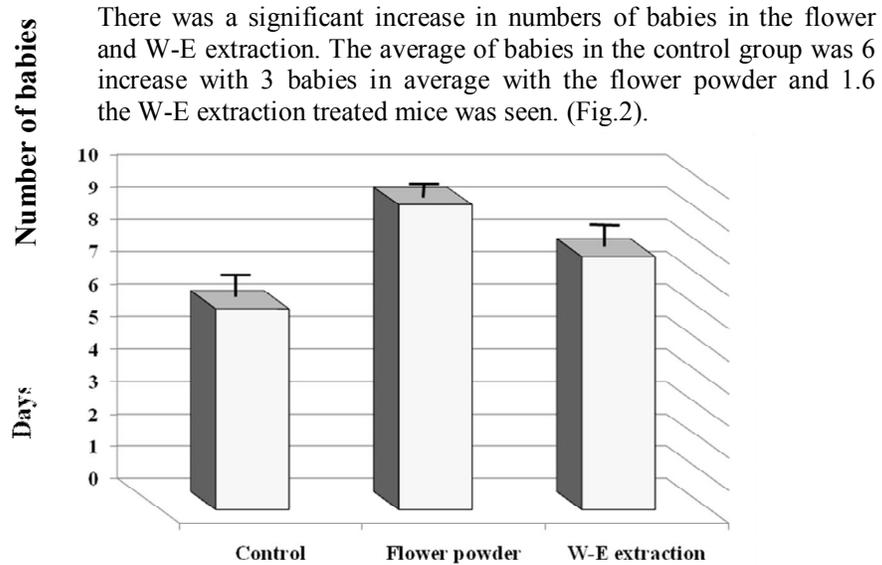


Fig.2 Number of babies within the control, flower powder and W-E extraction treated groups.

Conclusion

The results showed a significant effect on the ovulation in mice. More researchs are in process to identify the specific effect on the hormonal secretion in mice. A future research on human could help in giving a promising treatment for infertility in human.

References

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