

Effectiveness of Homeopathy for the Treatment of Pseudopregnancy in Bitches*

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Abstract: The effects of homeopathy on pseudopregnancy in bitches were investigated. Thirty clinically pseudopregnant bitches were used. Fifteen dogs were treated by homeopathy and the remaining animals received placebo treatment. Thuja D30 globules, which contain Thuja Occidentalis, were given orally (8 globules, 3 times a day) as a homeopathic agent. Clinical response was evaluated every 5 days. Maximum duration of the treatment was 3 weeks.

Physical changes in mammary glands and behavioral response were evaluated during the treatment. Animals were classified as +1, +2 and +3 according to physical changes in the mammary glands. In addition to qualitative examination, longitudinal and transversal mammary gland dimensions were measured by a caliper compass. Complete recovery in both physical and behavioral signs was observed in all animals in the treatment group. Mean duration of treatment was 13.67 ± 5.50 days. Average regression in mammary gland dimensions in the treatment group was 3 times that of the control group on day 10. No side effects were observed in the treatment group.

It is concluded that homeopathic Thuja D30 may be used effectively and safely as an alternative to common pharmacological agents in pseudopregnant bitches. Taking its advantages into account, homeopathy has the potential to be used in pseudopregnant bitches.

Key Words: Bitch, homeopathy, Thuja D30, pseudopregnancy

Dişi Köpeklerde Yalancı Gebeliğin Tedavisinde Homeopati Uygulamasının Etkisi

Özet: Bu çalışmada, yalancı gebe köpeklerde, alternatif bir tedavi yöntemi olarak, homeopati uygulamasının iyileşme sürecine etkisi araştırıldı. Çalışma materyalini ırk, yaş ve kilo sınıflandırılması yapılmadan yalancı gebelik tanısı konulan 30 adet dişi köpek oluşturdu. Bu hayvanlar, 15 adedi homeopatik ilaç verilen tedavi grubu ve 15 adedi plasebo verilen kontrol grubu olmak üzere ikiye ayrıldı. Homeopatik ilaç olarak Thuja Occidentalis içeren Thuja D30 globuli, günde 3 defa 8 globuli dozunda oral yolla kullanıldı. Uygulama sonuçları, beşer günlük aralıklarla değerlendirildi. Belirtilen aralıklarda iyileşme görülmeyen olgularda uygulamalara en fazla 3 hafta daha devam edildi.

Yalancı gebe köpeklerin davranış ve memelerindeki değişiklikler, tedavi öncesi ve iyileşme süreci boyunca değerlendirildi. Memelerdeki görünüme göre; +1, +2 ve +3 şeklinde sınıflandırma yapıldı. Memelerdeki nitel gözlemlere ilaveten, meme boyutundaki değişiklikler de nicel olarak tespit edildi. Tedavi grubundaki tüm köpeklerin hem davranışlarında hem de memelerinde tam bir iyileşme izlendi. Yalancı gebe köpeklerin genel iyileşme süresi ortalama $13,67 \pm 5,50$ gün olarak belirlendi. Memelerdeki ölçümler sonucunda tedavi grubundaki hayvanlarda memelerdeki küçülme oranının ortalaması 10. gün sonunda kontrol grubuna göre 3 kat daha fazla bulundu. Tedavi grubundaki köpeklerde hiç bir yan etki görülmedi.

Sonuç olarak, yalancı gebeliğin tedavisinde günümüzde kullanılan klasik yöntemlere alternatif olarak homeopatik Thuja D30'un başarıyla ve güvenle kullanılabileceği belirlendi. Bu avantajı ile homeopatik ilaçların giderek yaygın bir şekilde kullanılacak bir seçenek olduğu kanısına varıldı.

Anahtar Sözcükler: Dişi köpek, homeopati, Thuja D30, yalancı gebelik

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Introduction

Clinical pseudopregnancy is a syndrome observed in non-pregnant bitches about 6 to 12 weeks after estrous. It is characterized by clinical signs such as nesting, weight gain, mammary enlargement, lactation and behavioral changes. The most frequent signs are serous brownish or milky secretion and generalized mammary edema. Mild cases usually recover spontaneously. However, incidence of reoccurrences in subsequent estrous cycles is high and complications may occur (1-5).

Pharmacological treatment is considered in cases of severe behavioral and physical signs. Pharmacological approaches to the treatment of pseudopregnancy have included steroids such as estrogens, progestins and androgens. More recently dopamine agonists are preferred with the purpose of suppressing prolactin secretion (6-8).

Natural drugs, especially homeopathic agents, are alternatively used in the treatment of pseudopregnancy in bitches. Pulsatilla 15C, Urtica Urens 3C, Urtica Urens D6, Asa foedita D4 and Thuja Occidentalis D30 are among the homeopathic agents used in pseudopregnancy. Thuja Occidentalis include pinene, fenchone and thujone. Thuja Occidentalis affects renal function and the nervous system and regulates hormones. It is effective in abdominal and mammary edema regression. In addition to its use in short and prolonged interestrous intervals in dogs, it is reported to be effective in pseudopregnancy treatment. Homeopathic drugs are given one tablet or 8-12 globules three times daily (9,10).

Aslan et al. (10) concluded that Thuja Occidentalis D30 and Urtica Urens D6 were effective in pseudopregnant bitches without any observed side-effects.

The aim of this study was to investigate the effectiveness of a homeopathic drug, Thuja D30 (Thuja

Occidentalis), on the behavioral signs, mammary regression and termination of lactation in pseudopregnant bitches.

Materials and Methods

The study was performed in 30 clinical pseudopregnant bitches, which were brought to the Small Animal Clinic of Department of Obstetrics and Gynecology, Faculty of Veterinary Medicine, University of Ankara. Fifteen bitches were used as the treatment group while the remaining 15 bitches were used as the control group. No breed, live weight and age classification were made. However, we paid attention to choose dogs that had no reproductive or physical problems.

Thuja D30 globules (Richter Pharma) were used as homeopathic agents. The drug contains active Thuja Occidentalis in form of globules for oral use. Eight Thuja D30 globules were given three times a day in the treatment group. The control group received placebo globules of sugar. Duration of the treatment was 5 days in both groups. The dogs were re-evaluated on the 5th day of treatment. Dogs without expected recovery received an additional treatment of 5 days. Maximum duration of treatment was 3 weeks.

Animals that had at least two of signs such as nesting, aggression, self-sucking of mammary glands, licking of abdominal region, mothering inanimate objects, restlessness and decreased activity were regarded as having behavioral problems.

Qualitative score classifications, based on the appearance and secretion of mammary glands, are given in Table 1.

Physical signs in pre-treatment and treatment periods were evaluated according to Table 1 in both groups.

Table 1. Qualitative scoring of mammary glands.

Score	Statement
-	No secretion and change in mammary glands
+1	Mild enlargement of mammary glands and presence of secretion when palpated
+2	Enlargement and color changes of mammary glands, small amounts of secretion
+3	Enlargement, changes in color and temperature of mammary glands, severe secretion

Longitudinal and transversal dimensions of mammary glands were measured by a caliper compass for 10 days beginning from the start of treatment.

A computer-based SPSS program (version 11.0, descriptive statistics) was used to evaluate the mean duration of time for recovery according to the qualitative classification. Non-parametric Mann-Whitney U test was used to evaluate the difference in regression of the mammary glands between the groups.

Results

All of the animals with behavioral signs at the start of treatment displayed no signs on day 10 of the treatment, while only two bitches (13.3%) in the control group recovered, on days 10 and 15, respectively.

There were no (+3) score animals in the treatment group after 5th day of the treatment. In contrast, (+3) score animals in the control group (13.3%) tended to remain until cessation of placebo administrations.

Quantitative measurements in both groups are given in Tables 2 and 3. Mean longitudinal and transversal

dimensions of mammary glands of animals in the treatment group at the end of treatment were 37.9% and 39.1% smaller than the first measurements, respectively. These percentages were 11.9% and 13.9% in the control group. Recovery rate in the treatment group was higher than that in the control group and the difference between the two groups was statistically significant ($P < 0.001$).

The highest recovery rate (40%) was observed between days 11 and 15 in the treatment group. In addition, 66.7% of the bitches in the treatment group were completely free of physical signs on day 15. Spontaneous recovery occurred in only two bitches (13.3%) in the control group between days 11 and 15. The efficacy of the treatment was 100% in the treatment group.

Minimum and maximum scoring of mammary glands classification was only performed in the treatment group (Table 4). Since only 1 bitch for each (+1) and (+2) scores in the control group recovered, no mean values were calculated for the control group. Mean duration of treatment was 13.67 ± 5.50 days.

Table 2. Quantitative recovery of mammary glands of animals in the treatment group.

	Mammary dimension (cm)		Mean and standard deviation (X ± SD)		Regression (%)	
	Minimum (longitudinal x transversal)	Maximum (longitudinal x transversal)	longitudinal (cm)	transversal (cm)	longitudinal	transversal
n: 15						
Before treatment	2.6x1.4	10.0x6.2	5.45 ± 1.99	4.55 ± 1.45	--	--
5 th day of the treatment	1.6x1.1	8.5x5.7	4.46 ± 1.78	3.69 ± 1.22	18.1	18.9
10 th day of the treatment	1.5x1.0	5.9x4.3	3.38 ± 1.12	2.78 ± 0.79	37.9	39.1

Table 3. Quantitative recovery of mammary glands of animals in the control group.

	Mammary dimension (cm)		Mean and standard deviation (X ± SD)		Regression (%)	
	Minimum (longitudinal x transversal)	Maximum (longitudinal x transversal)	longitudinal (cm)	transversal (cm)	longitudinal	transversal
n: 15						
Before treatment	2.2x1.7	8.9x5.1	4.83 ± 2.02	3.44 ± 1.03	--	--
5 th day of the treatment	2.1x1.6	9.1x4.9	4.64 ± 2.06	3.26 ± 1.02	3.99	5.03
10 th day of the treatment	2.0x1.3	9.0x4.8	4.26 ± 2.03	2.96 ± 1.07	11.9	13.9

Table 4. Recovery days, mean and standard deviation in the treatment group (SPSS descriptive).

Score	+1	+2	+3	Total
n / %	1 / 6.7	9 / 60	5 / 33.3	15 / 100
Recovery days (min. - max.)	5	3-19	7-21	3-21
Mean and standard deviation (X ± SD)	5	13.66 ± 5.05	15.4 ± 5.59	13.67 ± 5.50

Discussion

Ergot derivatives have been widely used for treatment of behavioral signs during pseudopregnancy. Janssens (11) investigated different doses of bromocriptine and reported that treatment was successful in about 80% of bitches. Baştan et al. (7), using cabergoline, stated that behavioral signs recovered in 22.7%, 31.8% and 45.5% of animals on the 1st, 2nd and 3rd day of treatment, respectively. However, 4.5% of animals had emesis as a side effect of cabergoline administrations. Six of 9 (66.7%) pseudopregnant bitches displayed no behavioral signs in the first 5 days of treatment and the remaining 3 dogs (33.3%) had no behavioral signs on day 10 in the treatment group. We did not observe similar results in the control group. Success of homeopathic treatment on behavioral signs was 100% and no side effects were observed.

Recently, dopamine agonists bromocriptine and cabergoline have been used in pseudopregnancy with the purpose of suppressing mammary secretion. There were no significant differences in the effectiveness for physical signs between bromocriptine and cabergoline treatments (8) and cabergoline treatment was successful in about 90% of the pseudopregnant bitches (12). In the present study, Thuja D30 treatment was successful in all bitches and the results were in agreement with the report by Aslan et al. (10) in which mean durations of treatment were 13.3 and 14.1 days for Thuja D30 and Urtica Urens D6, respectively. Mean duration of successful treatment in the present study was 13.67 days.

Recovery of mammary glands took a longer time than did behavioral signs in the study. Signs of recovery in mammary glands occurred in 86.7% and 100% of animals in the treatment group on days 5 and 10, respectively. In contrast, we observed physical recovery in

only 6.7% and 13.3% of animals in the control group on days 5 and 10, respectively.

Thuja D30 administration resulted in recovery of physical and behavioral signs in all animals. In addition, the effectiveness of Thuja D30 treatment in this study was higher than the reported effectiveness of other pharmacological approaches used in pseudopregnant bitches.

Bromocriptine administration has side effects such as diarrhea, emesis and polyuria. Although there are some reports that the emetic effect of bromocriptine is diminished by using it in combination with peripherally active anti-emetics (11,13), Küplülü et al. (14) observed emesis in 25% of dogs given bromocriptine and anti-emetic combination. Furthermore, the use of metergoline, another anti-prolactinic drug, is not recommended in dogs due to its common side effect of restlessness (15). Sokolowski (16) reported that reproductive steroids used in pseudopregnancy had problems in effectiveness and reliability and concluded that this group of hormones should be avoided in pseudopregnancy. None of the side-effects encountered in cabergoline, metergoline, bromocriptine and reproductive steroids were observed in the present study. It is concluded that Thuja D30 is more reliable than other therapeutic agents.

Thuja Occidentalis affects the central nervous system and is effective in abdominal and mammary edema regression due to affecting renal function. Homeopathic Thuja D30 was given in 8 globules three times daily to all pseudopregnant bitches and this procedure did not affect the results of the study (9).

In summary, Thuja D30 was effective in the treatment of the pseudopregnant bitches and may be used safely as an alternative treatment.

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