A. Ü. Veteriner Fakültesi Doğum Bilgisi ve Jinekoloji Kürsüsü
Prof. Dr. Hüseyin ERK

İNEKLERDE RETENTİO SECUNDİNARUM'UN SEBEPLERİ ve TEDAVİSİ ÜZERİNDE İNCELEMELER*

Etiology and Treatment of placental Retention in the cow - A Comparison of Three Methods

Erol Alaçam**

Summary: The etiology of retained placenta and the effects of three different methods on the productivity of treated cows have been discussed.

Özet: Bu çalışmada retentio secundinafum'lu 178 baş inekte hastalığın etyolojisi ve bu hayvanlara uygulanan 3 ayrı sağıtım metodunun sonraki döl verimine etkileri üzerinde incelemeler yaptık.

İntroduction

Retention of the placenta in the cow is the most important pathological sequelae related to parturition. The incidence of retention of the bovine placenta after delivery is reported to vary ranging from 6.4 to 69.0 per cent (4,6,9,14).

The economic losses due to this condition is generally considered to be a major problem.

The etiological factors of the retained placenta and the methods of treatment favoured by different vererinary practioners are almost numerous.

This investigation involves with the etiology of retained placenta and its treatment.

---

* This study was summarized from PhD thesis submitted with Faculty of Vet Med. of Ankara University, Turkey.

** A.Ü. Veteriner Fakütesi Doğum B. ve Jinekoloji Kürsüsü Dr. Asistanı Ankara, Türkiye.

Materials and Methods

İn the period of January 1972 – Februray 1974, 178 cows (% 29.2 Local bred, % 7.2 Cross–bred (mainly Brown Swiss), % 12.4 Brown Swiss, % 9 .6 Holstein, % 17.0 Jersey) were observed. Fourty two of these animals were utilized in the treatment of retained placenta.

These 42 subjects were divided into 3 groups for the application of three different means of treatment and to study the effects of these methods on the productivity.

1) No treatment as a method: The cows were left untreated controles.

2) Drug treatment: No attempt was made to remove the placenta manually. TetracyclineR or FuracinR tablets were inserted into the uterus. Oxytocin and diethylstilbestrol injected (i/m) and waited dor the expulsion of the fetal membranes. Parenteral antibiotics werein jected when necessary.

3) Manipulations following a period of 3 days to remove those remaining fetal membranes after clinical treatment: Following 3 days treatment as method 2, still remanining membranes removed manually and TetracyclineR or FuracinR tablets inserted into the uterus.

The comparisons of productivity were made among these 3 groups.

For prevention against the condition, EviselR (Eczacıbaşı) (Selenyum+Vitamin E) 20cc (i/m) was injected, a month before the calving to the 16 pregnant cows that previously had the history of retained placenta following their last delivery. VigantolR (Bayer) (Vitamin A, D3,E) 7.5 cc (i/m) was injected to 4 pregnant cows having the habit of retained fetal membranes in their previous deliveries. The injections were made 15–25 days before the calving time.

Results and Discussion

The results have been summarized in Tables 1, 2 and 3.

According to many investigators (4,11,13,17,19) brucellosis causes the necrosis and the adhesion of the cotyledons, and this is one of the most important etiological factor of retained placenta. Boyd and Sellers (4) reported that the incidence of retained placenta in brucellosis–positive herds is 3 times more than that of brucellosis free herds. Brands (5) observed that brucellosis is not an important etiological factor for retained placenta in dairy herds. On the other hand, Kennedy (14) showed that the amount of retained placenta may be

TABLE 1.

The results showed that the etiological factors were as follows

İNFECTİONS:	
Brucellosis	% 15.2
Tuberculosis	% 0.6
PREDİSPOSİNG FACTORS OF UTERİNE İNERTİA:	
Uterine inertia (as a disease)	% 18.0
Poor hygienic conditions and feeding	% 6.1
Hypocalcemia	% 5.6
Dystocia	% 13.5
Twins	% 7.5
Triplets	% 0.6
Late delivery	% 0.6
Cesarien operation	% 1.1
Traumatic pericarditis	% 1.1
Hydrops of fetal membranes	% 0.6
OTHER CAUSES:	
Abortion (negative for brucellosis)	% 14.2
Early delivery	% 14.0
Hereditary causes	% 0.6

TABLE. 2.

Fourty two cows were treated for retained placenta with 3 different methods with the following results

Treatment	Number	Time taken for expulsion of placenta (Average day)	Endometritis	Service (Average)	Time taken for conception (Av. day)	Steril
No treatment.	2	8	2 cows	3*	121*	1 cow
Drug treatment	20	7.7	8 cows	1.5	102.3	3 cows
Manual removal	20	3.4	1 cow	1.4	91.3	–

* only one case was positive.

TABLE 3.

Condition of retention cases during two weeks after calving

TREATMENT	APPETİTE			BODYWEİGHT		LACTATİON		
	Good	Fair	Poor	Normal	Loss	Good	Fair	Poor
No treatment.	–	1	1	–	2	–	1	1
Drug treatment.	8 % 40	8 % 40	4 % 20	13 % 65	7 % 35	4 % 20	10 % 50	6 % 30
Manual removal	10 % 50	7 % 35	3 % 15	15 % 75	5 % 25	10 % 50	6 % 30	4 % 20

higher in brucellosis free herds than brucellosis positive herds. In our observations, we found that there was a positive correlation between incidence of brucellosis and retention feteal membranes. It was found that 15.2 per acent of the placenta retained cows were brucellosis positive.

According to Wetherill (21), the incidence of retained placenta is higher in first calving heifers and older cows. We recorded the age and the calvings of the 92 cows which suffered from retained placenta. Our results showed that 30.4 per cent of the cows which retained placenta were on first calving and 23.9 per cent were on second calving. Although the old age was predisposing factor for uterine inertia and secondarly to retained placenta, in our observation, older cows (after 10th calving) had retained their fetal membranes less than first and second calvings (6.5 per cen).

According to McDonald (17),the best treatment to retained placenta was to give no treatment to the cows. We had two control cows which had no treatment to retained placenta. These cows had metritis after expelling their fetal membranes and only one of them concepted again after intra-uterin antibiotic treatment.

Some investigators recommended drung treatment (1,2,3,8,16, 20,21). According to them the manual removal of the membranes should be applied only for estetic reasons. Banerjee (1) reported that, the highest conception rate was after the drug treatment.

Manual removal of a retained placenta in the cow is practised by most veterinarians (3,7,8,10,12,14,15,17,18,22). According to these investigators if the membranes separate easily in 48–72 hours after the delivery of the fetus, this is the best time for manual removing.

In our study we treated twenty cows by manual removal and twenty cows with drug treatment. It maybe concluded that manual removing of retained placenta. was the choice of treatment for general condition and better conception rate of the animal.

References

1. **Banerjee, A.K.** (1966): *A study of the action of terramycin on the bacterial flora of the uterus in cattle following retained placenta.* Indian vet. J., 43, 319–326.
2. **Beattie, J.H., Leaming, J.D.** (1952): *Prophylactic and therapeutic use of aureomycin in retained placenta in cows.* Vet. Med., 47,11,451–452.

3. **Benesch, F., Wright, J.** (1962): *Veterinary obstetrics.* Bailliere Tindall and Cox., London.

4. **Boyd, W.L., Sellers, A.F.** (1948): *Some observations on post parturient cows in four separate herds as related to expulsion of their fetal membranes.* Cornell vet., 38, 3, 263–266.

5. **Brands, A.F.A.** (1966): *Enige Zoötechnische aspecten van retentio secundinarum bij runderen.* Thesis. Ref: The Vet. Bull, 36, 4579.

6. **Callahan, C.J.** (1969): *Postparturient infections of dairy cattle.* J.-A.V.M.A., 155, 12, 1963–1967.

7. **Chambers, E.E.** (1953): *Bovine sterility.* North American Veterinarian. 34,2, 106 1110.

8. **Coıd, C.R., McDıarmıd, A.** (1954): *Some observations on the retention of the foetal membranes in dairy cattle after their first pregnancy.* Vet. Rec., 66, 24, 350 351.

9. **Curtis, R.A.** (1973): *Prevention of retained foetal membranes in cattle.* Vet. Rec., 92, 11, 291–292.

10. **Erk, H.** (1961): *İneklerde doğum ve yavru atma sonunda şekillenen "Retentio Secundinarum" üzerinde inceleme.* A.Ü. Vet. Fak. Dergisi., 8,4, 347–360.

11. **Erk, H., Doğaneli, M., Akkayan, C.** (1972): *Veteriner doğum bilgisi (obstetrik) ve jinekoloji.* Ankara Üniv. Basımevi.

12. **Frıazer, J.C.** (1960): *Abortions the most difficult.* M.V.P., 41,2, 41.

13. **Hafez, E.S.E.** (1968): *Reproduction in Farm animals.* 2 nd Ed. Lea Febiger, Philadelphia, U.S.A.

14. **Kennedy, A.J.** (1947): *Retention of the placenta in the bovine.* Vet. Rec., 59, 519–523.

15. **Knudsen, K., Szabo, J., Trangboek, L.** (1971): *An investigation of the use of furaltadone tablets in placental retention in cows.* Medlemsbl. dansk. Dyrlaegeforen, 54, 379–385.

16. **Mayor, Y.O.** (1956): *Some observations on the post–partum uses of phenylmercuric dinaphytlmethane disulphonate (hydrapen) combined with stilbestrol in cattle.* Vet. Rec., 68, 6, 111.

17. **McDonald, L.E.** (1953): *Placental retemntion in the cow.* Proc. A.V.M.A. 90th Ann. Meeting, 418.

18. **Montgomerie, R.F., et al.** (1955): *Retetion of placenta or afterbirth.* Simplified Veterinary Guide. Caulfield. Victoria, Australia.

19. **Roberts, S.J.** (1971): *Veterinery ocstetrics and genital diseases (Theriogenology)*. Ithaca, Newyork, 2nd Ed.

20. **Sharma, R.V.** (1972): *Leptadenin the treatment of retained placenta.* Indian J. of Animal Health, 11, 1, 115–118.

21. **Wetherill, G.D.** (1965): *Retained placenta in the bovine.* Can. Vet. J., 6, 290–294.

22. **Williams, W.L.** (1950): *The diseases of the genital organs of domestic animals.* 3rd Ed., George Banta Pub. comp., Manasha, Wisconsin, U.S.A.

Yazı "Dergi yazı kuruluna" 2-10-1974 günü gelmiştir.