



THE IMPORTANCE OF PUERPERAL GYNECOPATHIES IN INTENSIVELY RAISED COWS

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Abstract: The puerperal period represents one of the most sensitive links in the reproductive cycle, which is why there is also a higher incidence of uterine disorders. This phenomenon is encountered both in intensive farming systems and in traditional household farming (1,6,7). With such a diverse etiology, our observations aimed to investigate, within a farm in Northeastern Romania, the reproductive process and identify the etiology of both uterine disorders and the genital system in general (2,13).

The analysis of the distribution of conditions during the years 2022-2023 shows an evolution dependent on certain management factors. Thus, in 2022, out of 220 calvings, 5.4% were medical conditions, 4.5% were surgical conditions, and 20.9% were gynecological conditions. In 2023, with a similar number of calvings (240), medical conditions accounted for 4.6%, surgical conditions for 4.1%, and gynecological conditions for 16.6%.

The number of calvings in 2022 shows no significant differences: 73 in spring, 45 in summer, 39 in autumn, and 63 in winter. In the same year, the influence of micro and macroclimate factors is observed through the different percentages of acute endometritis. Thus, in spring, the proportion of acute inflammatory conditions is 26.0%, followed by 23.8% in winter and 15.3% in autumn.

The same differences persist in chronic endometrial inflammations: 12.3% in spring, 11.1% in winter, and 5.1% in autumn. Placental retentions, sometimes the cause of inflammations, were diagnosed at a rate of 16.4% in spring, 14.3% in winter, and 5.1% in autumn.

The overall analysis of 2022 clearly highlights that acute endometritis accounts for the majority (21.8%), followed by placental retentions (12.7%) and chronic endometritis (10.0%).

Keywords: cow, puerperal period, puerperal endometritis, placental retentions.

Results and discussions

Introduction

- Achieving high fertility levels in a short period is the primary goal in cattle breeding (4,5,8). The puerperal period represents one of the most sensitive links in the reproductive cycle, which is why there is also a higher incidence of uterine disorders (15, 18, 22). This phenomenon is encountered both in intensive farming systems and in traditional household farming (3,9).
- Although specialized literature highlights the influence of certain macroclimate factors, the quality of the microclimate along with breeding technology also play a significant role (14,20). Cumulatively, significant changes in fertility are observed, resulting in economic losses caused by these conditions (10,11,19). To avoid economic losses and achieve high fertility rates, it is necessary to provide supervision during calving and especially monitor the dynamics of the puerperal period (12,24). For cattle herds, infertility rates are estimated to range from 15 to 40%.

- To determine the importance of gynecological disorders in the overall morbidity recorded on the farm, statistical observations were made regarding the distribution of conditions within the overall morbidity.
- The analysis of the distribution of conditions in the dynamics of the years 2022-2023 shows an evolution dependent on certain management factors. For instance, in 2022, out of 220 calving cows, medical conditions accounted for 5.4%, surgical conditions for 4.5%, and gynecological conditions for 20.9%. In 2023, with a similar number of cows (240), medical conditions accounted for 4.6%, surgical conditions for 4.1%, and gynecological conditions for 16.6% (table 1).
- Comparatively analyzed, it is noted as a primary aspect the significant proportion of gynecological conditions within the studied population. This phenomenon was observed in 2023 when gynecological conditions (16.6%) predominated the morbidity picture on the farm.

Table 1

Table 2

The distribution of affections in the farm

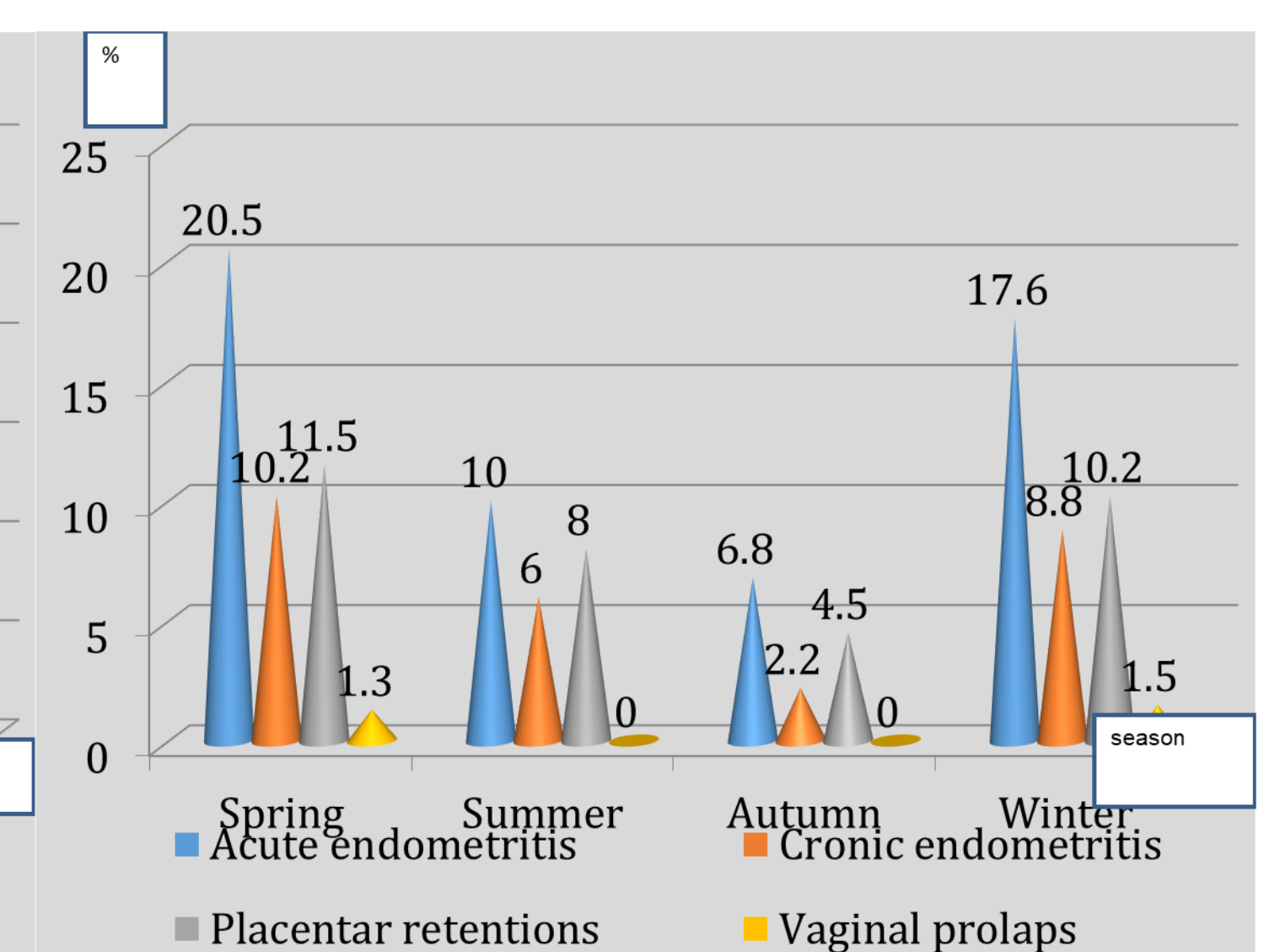
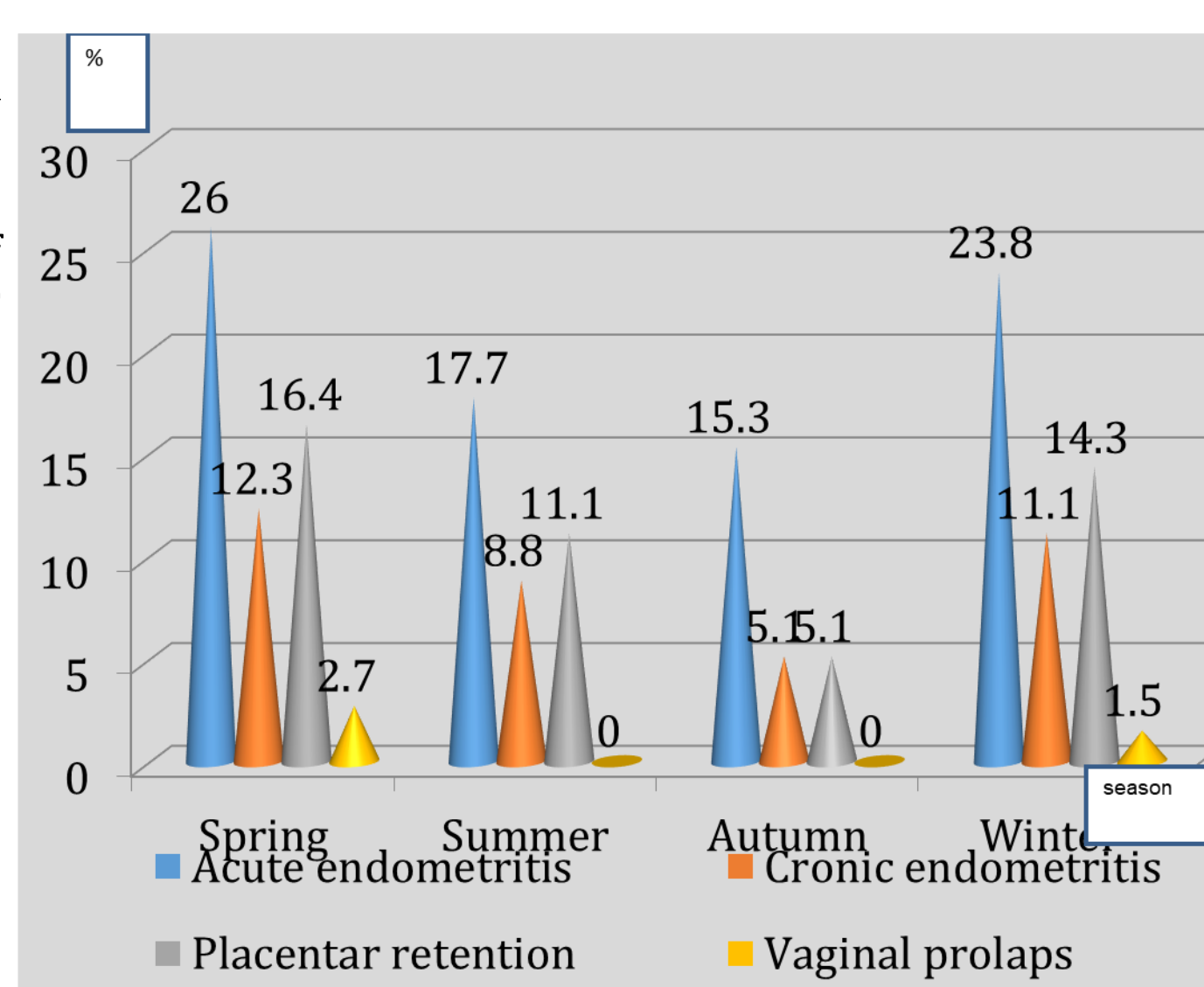
Year	Young cows	Medical conditions		Surgical conditions		Gynecological diseases		Year	Young cows	Cows with placental retention		Cows with acute endometritis		Cows with chronic endometritis		Cows with uterine prolapse	
		nr.	%	nr.	%	nr.	%			nr.	%	nr.	%	nr.	%		
2022	220	12	5,4	10	4,5	46	20,9	2022	220	28	12,7	48	21,8	22	10,0	3	1,3
2023	240	11	4,6	10	4,1	40	16,6	2023	240	22	9,2	36	15,0	18	7,5	2	0,8

Material and method

- The puerperal period is influenced by a multitude of factors, among which prolonged stabling, deficiencies in animal and shelter hygiene, and extreme temperatures (both high and low) stand out (17,21). With such a diverse etiology, our observations aimed to investigate the reproductive process and identify the etiology of uterine disorders and the genital system in general within the Ripiceni farm (23). Our research initially focused on studying the proportion of gynecological changes in the herd, the influence of milk production levels, and their correlation with diagnostic and therapeutic elements. The study material consisted of Holstein Friesian cows, with 210 examined in 2022 and a similar number of 230 females in 2023.

- The analysis of the incidence and diagnosis of these conditions was conducted through both general clinical examination and gynecological examination. The general clinical examination aimed to assess the herd's maintenance status, estrus manifestation duration, the number of artificial inseminations required for gestation, and any antecedents in calving. Based on these data, we proceeded to the next diagnostic step: the gynecological survey. This activity included:

- History taking
- General clinical examination
- Internal clinical examination
- History taking: In this stage, several pieces of information are observed:
 - Adherence to the breeding schedule
 - Maintenance system
 - Estrus detection technology and calving process
- General clinical examination was conducted externally on the female, along with an internal examination. External clinical examination involved observing changes in the abdominal area, the appearance and development of the pelvis, the condition of the sacro-sciatic ligaments, along with changes in external organs (quantity and quality of genital secretions).
- Internal clinical examination was performed either through colposcopy or transrectal and trans-uterine examination. In these cases, the appearance of the uterine mucosa, the vaginal opening of the cervix, and the nature of physiological or pathological discharges were observed. Transrectal examination aimed to observe topographical changes, consistency, the contractility of genital segments, and the physiological or pathological condition of the oviducts and ovaries.



Conclusions

1. In 2022, 220 cows were recorded to have calved, with 5.4% experiencing medical conditions, 4.5% surgical conditions, and 20.9% gynecological conditions. This phenomenon was also observed in 2023, with gynecological conditions representing the highest proportion at 16.6%.

2. In 2022, acute endometritis recorded the highest percentage at 21.8% of cases compared to 15.0% in 2023, followed by chronic endometritis. The latter accounted for 10.0% in 2022 and 7.5% in 2023.

3. Depending on the season, chronic endometritis recorded similar values in both years: 12.3% in spring (2022) and 10.2% in winter throughout 2023. Retained fetal annexes in 2022 followed the same trend, with higher percentages in the spring at 12.5% and winter at 11.1%, while in 2023, they recorded values of 10.2% in spring and 8.8% in winter.