

SALMONELLOSIS IN DAIRY CALVES AND THE IMPORTANCE OF INITIAL MANAGEMENT IN THE POSTNATAL PHASE

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INTRODUCTION

Salmonellosis is an important disease in dairy cattle farming, due to its high prevalence and great economic losses. This disease, caused by a gram-negative bacterium of the genus *Salmonella*, is generally transmitted via the oral-fecal route through environmental or food contamination. Bovine neonates can be infected by a variety of *Salmonella* serotypes in the first hours of life.

OBJECTIVE

The objective of this report is to describe an outbreak of Salmonellosis on a commercial dairy farm in the city of Campina do Monte Alegre, Brazil.

MATERIALS AND METHODS

Information was collected on the post-birth management of 13 calves, in addition, a general clinical examination was carried out with the assessment of heart rate, respiratory rate, temperature, color of the oral and vulvar mucous membranes, turgor, capillary refill time and fecal score. For diagnosis, fecal material was collected for microbiological culture.

CONCLUSION

This report highlights the importance of adequate post-birth management of calves, as environmental conditions directly influence the transmission of the disease and the outcome of the pathogen-host interaction. The implementation of biosecurity measures such as isolation of patients, implementation of cleaning and disinfection protocols and improvement of post-birth management practices in relation to strengthening immunity, contribute to reducing the source of infection in the calf's environment and, consequently, minimize the risk of future outbreaks that generate economic losses.

ACKNOWLEDGEMENTS:



RESULTS AND DISCUSSION

Table 1. Results of the physical examination carried out in the field.

ID	Sex	Physical Examination						
		HR	RR	RT	Turgor	CRT	Ocular and vulvar mucous membranes	Fecal scoring*
1	Female	148 bpm	56 bpm	38,9°C	2"	1"	Pink	0
2	Female	116 bpm	96 bpm	40°C	5"	2"	Hyperemic	0
3	Female	200 bpm	92 bpm	39,1°C	2"	3"	Pink	3
4	Female	144 bpm	44 bpm	38,6°C	3"	2"	Pink	2
5	Male	132 bpm	32 bpm	40,2°C	4"	3"	Pink	2

Abbreviations: HR = heart rate (beats/min); RR= respiratory rate (breaths/min); RT = rectal temperature; CRT = capillary refill time *McGuirk (2008)

The presence of *Salmonella enterica* was confirmed in five calves. The observed symptoms suggestive of Salmonellosis were tachycardia (100%/5), tachypnea (60%/3), hyperthermia (40%/2), mild dehydration (20%/1), moderate dehydration (20%/1) and diarrhea (60%/3), in addition to previous mortality history. The breeding system and health management on the property were deficient, the calves were born in the maternity ward in a *compost barn* system and were kept in the same place for more than 12 hours with their mother, before being transferred to the calf pen. The transfer of passive immunity was not evaluated and the system did not have an isolation area for sick animals.