Infectious agents identified by real-time PCR, serology and bacteriology in blood and peritoneal exudate samples of cows affected by parietal fibrinous peritonitis after caesarean section

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Bovine Clinic, Sustainable Livestock Production, FARAH

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Introduction

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Short communication

A new predilection site of *Mycoplasma bovis*: Postsurgical seromas in beef cattle

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Veterinary Record Case Reports

FOOD/FARMED ANIMALS

Atypical case of parietal fibrinous peritonitis in a Belgian Blue heifer without a history of laparotomy

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SUMMARY

A 19-month-old Belgian Blue heifer was referred to the Veterinary Clinic of Liege University. The heifer was 2 months pregnant by insemination and presented hyperthermia, anorexia and weight loss. Rectal palpation revealed a large, depressible abdominal mass. Diagnosis of parietal fibrinous peritonitis (PFP) was made by ultrasound, revealing a liquid and fibrin filled

University of Liège. The heifer had undergone an artificial insemination (AI) 2 months before and had been confirmed pregnant by ultrasound examination. After that, the heifer had shown a gradual reduction of feed intake, increasing symptoms of abdominal pain and hyperthermia. The referring veterinarian had treated the heifer intravenously with a non-steroidal anti-inflammatory

ORIGINAL RESEARCH

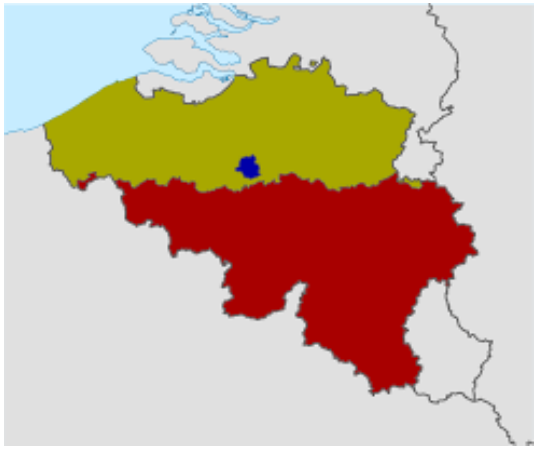
Comparison between generalised peritonitis and parietal fibrinous peritonitis in cows after caesarean section

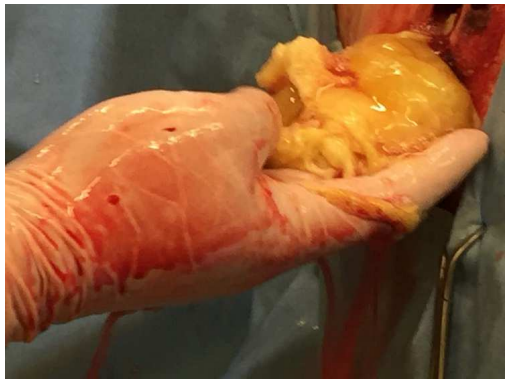
Salem Djebala [1], Julien Evrard,[2] Nassim Moula,[3] Linde Gille,[1] Calixte Bayrou,[1] Justine Eppe,[1] Hélène Casalta,[1] Arnaud Sartelet,[1] Philippe Bossaert[1]

Abstract

Background Parietal fibrinous peritonitis (PFP) and generalised peritonitis (GP) are two postoperative complications in cows, characterised by fluid and fibrin accumulation throughout the peritoneum (GP) or in an

Material and methods

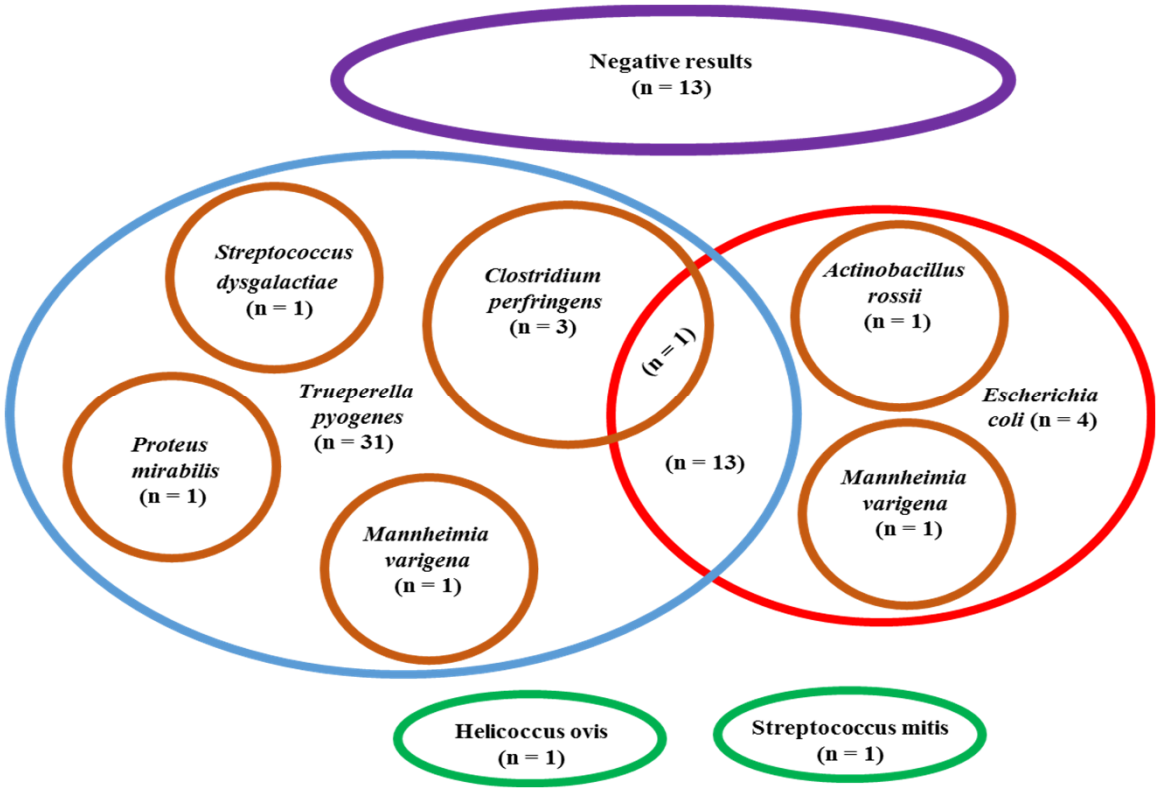




qPCR + serology
(BoHV4, M. Bovis, C. burnetii)
+
bacteriology

Results and discussion

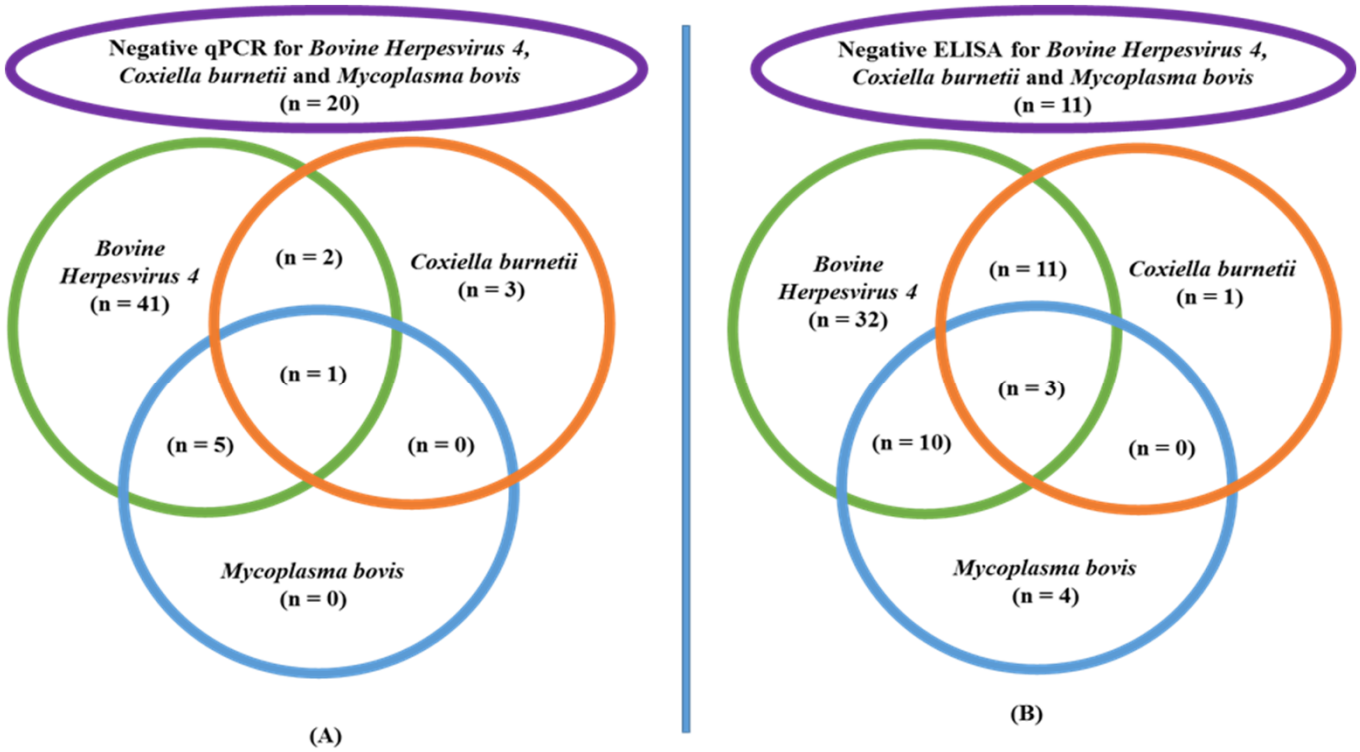
Results of bacteriological culture in peritoneal exudate samples, with specific focus on the 51 positive samples for *T. pyogenes* and 20 positive samples for *E. coli*.



Results and discussion

A) **Results of qPCR** in peritoneal exudate samples, with a specific focus on the 49 positive samples for *BoHv4*.

B) **Results of ELISA** in blood samples, with specific focus on the 56 positive samples for *BoHv4*.



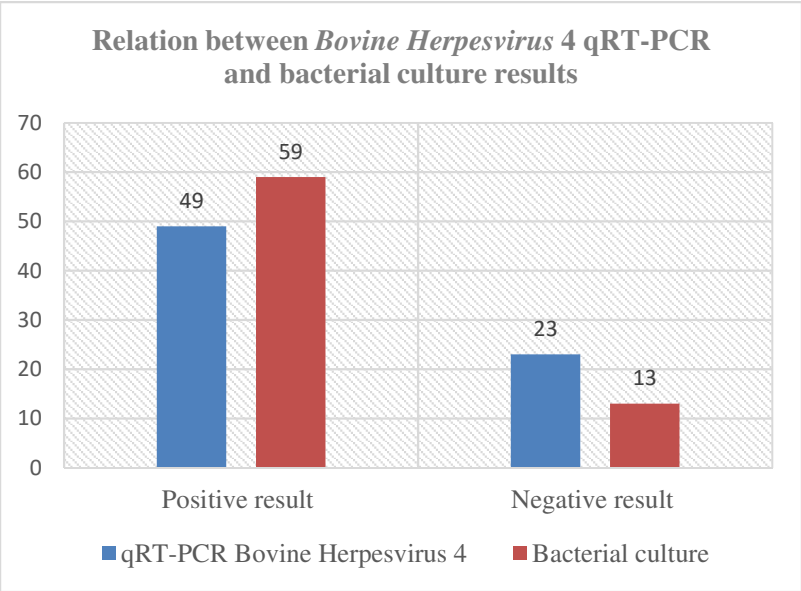
Results and discussion

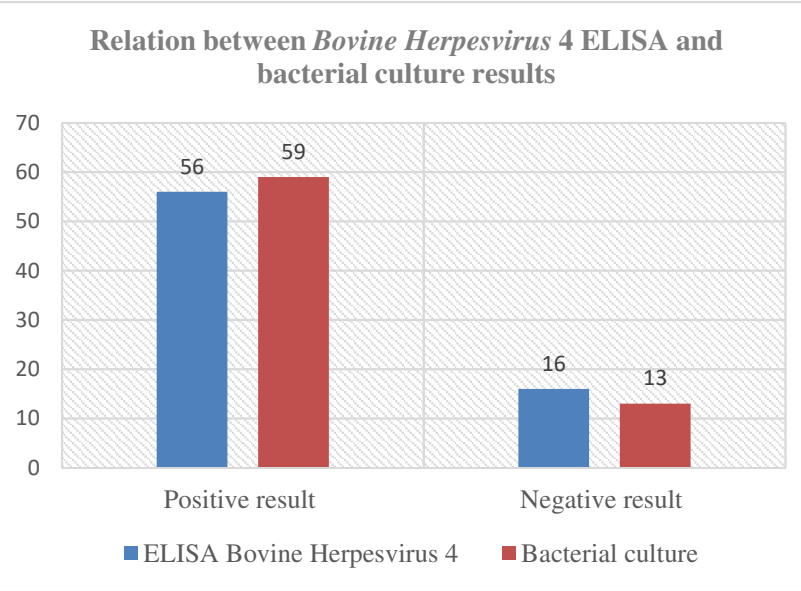
Combined results of ELISA (blood Samples) and qPCR (peritoneal sample) for *BoHv4, C. burnetii* and *M. bovis* in the 72 cows affected by parietal fibrinous peritonitis.

Results of qPCR and ELISA of the three searched germs		qPCR	
		Positive	Negative
Bovine Herpesvirus 4			
ELISA	Positive	45	11
	Negative	4	12
Coxiella burnetii			
ELISA	Positive	2	13
	Negative	4	53
Mycoplasma bovis			
ELISA	Positive	3	14
	Negative	3	52

Results and discussion

Relation between ELISA and qPCR of *BoHv4* with the **bacterial culture results**





Conclusion

- Parietal fibrinous peritonitis (PFP) can no longer be considered as a sterile process.

- Our study confirms previous reports of *M. bovis* in the peritoneal fluid of cows

- PFP is a new target sites for *BoHV4*, *C. burnetii* and other bacterial species

- The origin of the identified germs endogenous and exogenous contaminations of CS or due to the haematogenous spread.

- The exact role in these germs in the pathogenesis of PFP cannot be concluded, it requires further studies.

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veterinary sciences

MDPI

Article

Infectious Agents Identified by Real-Time PCR, Serology and Bacteriology in Blood and Peritoneal Exudate Samples of Cows Affected by Parietal Fibrinous Peritonitis after Caesarean Section

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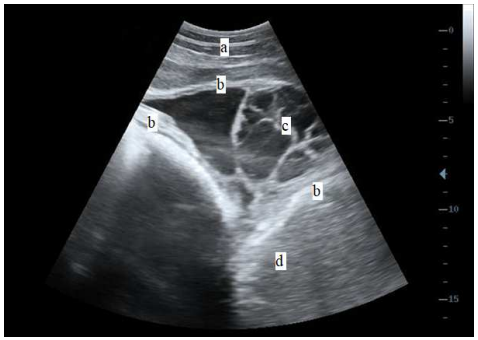

Thank you for your attention