Antimicrobial susceptibility profile of several bacteria species identified in the peritoneal exudate of cows affected by parietal fibrinous peritonitis after caesarean section

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This study aimed to evaluate the antimicrobial susceptibility of bacteria strains identified by bacterial culture in the peritoneal exudate of **156** cows affected by parietal fibrinous peritonitis (PFP) after caesarean section.

A total of **185** strains belonging to **21** species were identified. The most common isolated pathogen was *Trueperella pyogenes* (*T. Pyogenes*) (**107** strains) followed by *Escherichia coli* (**38 strains**), *Proteus mirabilis* (**6** strains), *Clostridium perfringens* (**6** strains), *Fusobacterium necrophorum* (**3 strains)** and *Streptococcus uberis* (**3** strains)**.** Various other species were identified either **twice** (*Helcococcus ovis, Mannheimia varigena, Staphylococcus aureus, Streptococcus dysgalactiae, Providencia rettgeri, Proteus sp*) or **once** (*Proteus vulgaris, Helcococcus sp., Salmonella typhimurium, Streptococcus mitis, Pseudomonas aeruginosa, Actinobacillus rossii*).

The antimicrobial susceptibility (disk diffusion assay), was tested for several isolated strains (**59**), but not for anaerobic bacteria and *T. pyogenes*, since susceptibility tests for these bacteria are technically complicated and beyond the routine expertise of the laboratory. Antibiotic resistance was commonly observed, even against molecules of critical importance (cefquinome **10/59**, ceftiofur **10/59**, enrofloxacin **17/59** and marbofloxacin **13/59**). Isolated bacteria were classified as weakly drug resistant (**22/59)** (resistant to Fewer than 3 classes), multidrug resistant **(24/59)** (resistant to more than 3 classes), extensively drug resistant **(12/59)** (resistant to several tested classes except one or two) or pan-drug resistant (**1/59**) (resistant to all the antibiotics tested).

This study highlights the level of antimicrobial resistance in cows suffering from PFP, and provides new insights in the therapy of PFP. Ideally, antimicrobial treatment of PFP should be based on bacterial isolation.