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Poster 6

Identification and antimicrobial resistance profile of bacteria isolated from the uterus of mares

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The main cause of infertility in mares is endometritis, characterized by acute or chronic inflammation of the endometrium. One of the main causes of the occurrence of inflammation in the endometrium is the response to bacterial infection. When the infection overcomes the defense capacity of the host it leads to the development of bacterial endometritis, often caused by *Streptococcus equi subsp. zooepidemicus*, an opportunistic pathogen. The present study aimed to evaluate the presence of bacteria in the uterus of mares before insemination. For this purpose, uterine washings were performed with sterile saline solution. Samples were centrifuged at 8000 *g* for 10min at 4ºC, and the pellet was streaked onto Blood Agar and MacConkey plates. The obtained isolates were identified using biochemical (VITEK 2 Compac and API, Biomerieux) and molecular identification methodologies (16S rRNA gene sequencing). Moreover, antimicrobial susceptibility tests (AST) were performed with VITEK 2 Compac, for fast growing bacteria and disc diffusion method, for fastidious bacteria. A total of 62 uterine washings were analyzed. A positive culture was obtained in 66% of the specimens, resulting in 57 isolates, with 57% of Gram-positive bacteria isolated. Regarding prevalence, the most frequently isolated genera were *Streptococcus* (33%), *Escherichia* (25%) and *Staphylococcus* (18%), while the most frequent species was *Escherichia coli*, followed by *S. equi subsp. zooepidemicus*. Most Gram-positive bacteria were sensitive to the following three antimicrobials, namely tetracycline, ceftiofur, and enrofloxacin. Regarding Gram-negative bacteria, over 90% of the isolates were sensitive to ceftiofur and gentamycin, while over 60% of the isolates were sensitive to enrofloxacin.

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