

TITLE: *SALMONELLA* SPP. ISOLATED FROM URINE SAMPLE OF A DOG WITH PYELONEPHRITIS – CASE REPORT

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ABSTRACT:

Bacteria from the genus *Salmonella* are Gram-negative rods taxonomically classified on the family *Enterobacteriaceae*. Those microorganisms with high zoonotic potential are the etiological agent of gastroenteritis cases in domestic animals, and eventually they can cause extraintestinal infections. In this context, the present study aimed to report a pyelonephritis case associated with the isolation of *Salmonella* spp. from the urine sample of a 9-year-old Lhasa Apso dog. The patient was referred to the Veterinary Hospital of UFRRJ with a history of Chronic Kidney Disease, anorexia, weight loss, sialorrhea and prostration. Complementary exams revealed a suggestive case of pyelonephritis. Urine samples to culture and antibiogram collected by cystocentesis were obtained. The sample was seeded aiming a quantitative evaluation in Blood Agar 5% and MacConkey Agar (AMC) and incubated at 35 °C for 24h. The growth in AMC revealed pure culture and a bacterial count above 300,000 CFU/ml, suggesting the involvement of this microorganism in the clinical case. The presumptive colony analysis showed the presence of Gram-negative rods, catalase positive. The macromorphological characteristics together with the biochemical tests results confirmed the identification of *Salmonella* spp. Additional confirmation was achieved by the MALDI-TOF MS. The urinary tract colonization is usually associated with high virulent microorganisms or immunosuppressed patients. When the source of infections comes from the intestine or skin microbiota, they ascend through the urethra, reaching the bladder. The infectious agent can also achieve the kidney, causing pyelonephritis. The casuistry at the Laboratory of Veterinary Microbiology Diagnostic (UFRRJ) from the last six years reinforces what is described in the scientific literature about the main urinary tract infectious agents (UTI). The bacteria involved in UTI mainly from the *Enterobacteriaceae* family, highlighting *Escherichia coli*. However, there are few reports on the isolation of *Salmonella* spp. from the urine sample of domestic animals. The ingestion of food and water contaminated by feces, as well as coprophagy habits are the most common ways to become infected by this bacterial genus. Other routes, such as umbilical, genitourinary, and transplacental transmission are also possible. The adoption of environmental control measures and prevention are extremely important in cases as described here.

Keywords: Salmonella; urinary tract infection; veterinary; pyelonephritis.

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