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Acute Phase Proteins as Biomarkers of Urinary Tract Infection (UTI) in Dairy Cattle

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Abstract : The present study aimed to investigate the diagnostic importance of acute phase proteins in urinary tract infection (UTI) in cattle. We describe the clinical, bacteriological and biochemical findings in 99 lactating cows. Blood and urine samples from diseased (n=84) and control healthy cows (n=15) were submitted to laboratory investigations. The urine analysis revealed hematuria and pyuria in UTI group. The isolated bacteria were E.coli (43/84) Corynebacterium spp, (31/84), Proteus spp. (6/84) and Streptococcus spp (4/84). The concentrations of Haptoglobin (Hp), serum amyloid A (SAA), α1-Acid glycoprotein (AGP), fibrinogen (Fb), total protein, albumen, and globulin were higher in cows with UTI when compared to healthy ones. Fifty-one of 84 cows with UTI were successfully treated. The levels of Hp, SAA, AGP, total protein, and globulin were associated with the odds of treatment failure. Conclusively, acute phase proteins could be used as diagnostic and prognostic biomarkers in cows with UTI.

Keywords : cows, urinary, infections, haptoglobin, serum Amyloid A
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