Vaginal and cervical tumors in dromedary camels

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Abstract:

Female dromedary camels (n=1621) were examined for failure of conception. The reproductive system was evaluated using transrectal palpation, ultrasonography and exploration of the vagina. Tissue overgrowths, which partially or completely surrounding the vaginal lumen or the cervix were detected in 8 cases (incidence, 0.005%). A common history of post-mating vaginal bleeding of these females was noticed. The overgrown tissue masses bled easily upon palpation. All females were multipara and aged between 9 and 13 years. Vaginal specimens were taken for histopathology. Blood samples were obtained for hematology and biochemistry. Microscopically, vaginal adenocarcinoma (n=5), vaginal leiomyoma (n=2) and cervical adenocarcinoma (n=1) were identified. By ultrasound, these tumors were homogenous and echogenic, but sometimes with multiple hypo-echogenic cavities. In one case, metastasis was observed in the regional and mesenteric lymph nodes and liver. Compared to healthy controls (n=15), camels with tumors showed significant increases of lymphocytes and monocytes and decreases in erythrocytes, hemoglobin and packed cell volume. Blood chemistry of camels with tumors revealed significant decreases in the total protein, albumin, calcium, phosphorus and magnesium and increases in globulin and alkaline phosphatase. The serum activity of creatine kinase, aspartate aminotransferase and gamma glutamyl transferase did not differ significantly compared to controls. In conclusion, this primary report described the prevalence, types, gross and microscopic appearances and changes in the hemogram and blood chemistry of female dromedary camels affected with vaginal and cervical tumors. Further investigations are needed to identify the associated risk factors. This study is supported by the King Abdulaziz City for Science and Technology (project: AC-34-292).

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