

Localized uterine body pyometra causing urinary obstruction in an American Bully bitch

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A 10 month old female intact American Bully was presented as an emergency case with a 3 day history of stranguria, hyporexia, and vomiting. Her owner had noticed his male dogs being interested in the female ~ 1 week prior to presentation and serosanguineous vulvar discharge was noted the day before arrival. The patient was housed separate from male dogs and the owner believed it was not possible that she had been mated. On presentation the patient was tense on abdominal palpation and the urinary bladder was enlarged and firm. Stranguria and vulvar enlargement were noted on examination. The dog also had profuse foul smelling vaginal discharge. Vaginal cytology revealed predominantly superficial and intermediate cells, heavy bacterial load and many degenerate neutrophils. Focused caudal abdominal ultrasonography showed a markedly enlarged bladder and an echodense, fluid filled uterus. A presumptive diagnosis of pyometra was made and ovariohysterectomy recommended. The patient was treated supportively with fluids, antibiotics, analgesics, and gastroprotectants in preparation for surgery. Exploratory laparotomy revealed hemoabdomen and a turgid, enlarged bladder with focal ulceration and necrosis. The uterine body was extremely enlarged caudal to the bifurcation and extending into the vaginal canal, which was suspected to cause a functional urethral obstruction. The urinary bladder was drained with suction and a bilateral ovariectomy and partial hysterectomy (focally dilated uterine body was not removed due to inability to excise) were performed. The remaining portion of the uterus was sampled which revealed the presence of pyohemorrhagic fluid. The fluid was drained via suction and a catheter was passed to ensure patency to the vagina. The ulcerated portion of the urinary bladder was resected and another catheter was passed to ensure urethral patency. Due to surgical findings being atypical for the presumptive diagnosis of pyometra, the owner was contacted by the surgeon and elected to euthanize due to guarded prognosis. The patient was submitted for postmortem examination along with the surgically resected uterine horns and ovaries. On gross evaluation the mucosal folds of the vagina, cervix and uterine body were severely thickened (edema), the mucosal surface was diffusely white and rough, resembling the keratinized epithelium of the vagina. In the most cranial aspect of the body of the uterus, mucosa was diffusely gray to pink, with multifocal pinpoint areas of hemorrhage and three well demarcated, irregularly shaped, depressed, dark red ulcers from 1 - 1.5 cm in diameter and a larger defect that was 3 x 3 cm, with a pale, depressed center and a black rim around the edges. The uterine horns were small with thickened walls and a reduced luminal space. Histological evaluation revealed complete absence of glandular structures and a severe subacute to chronic ulcerative process in the endometrium of the uterine body, most likely as a result of active inflammation and structural damage to the blood vessels (vasculitis) in this area. This inflammatory process extended rostrally to the bifurcation with moderate edema and inflammation in the uterine horns and caudally to the cervix. Inflammation also extended to the serosal surface of the urinary bladder. This case presentation was not typical for pyometra; specifically, being in estrus and the localized accumulation of pus within the uterine body. It can be presumed the focal uterine enlargement led to functional urethral obstruction.

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