Perioperative Morbidity and Mortality in Dogs Undergoing Adrenalectomy with Cavotomy for Resection of Invasive Adrenal Neoplasms.

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Introduction
- Approximately 20-48% of adrenal neoplasms exhibit vascular invasion with tumor thrombus.
- Pheochromocytomas are more likely to be invasive compared to adrenocortical tumors.
- Two small cohorts comprising a total of 24 dogs described in the literature document a 28-69% short-term survival.
- Aim: document complications and outcomes of adrenalectomy with cavotomy for the resection of invasive adrenal masses in a large cohort of dogs.

Materials and Methods
- Study design: Retrospective study.
- Inclusion criteria: Dogs that underwent open adrenalectomy with a cavotomy for resection of tumor thrombus in the vena cava.
- Medical records were evaluated and clinicopathological data recorded.
- Complications were documented and long-term outcome was obtained.

Results
- 45 client-owned dogs included.
- Masses were right-sided in 26, left-sided in 16 and bilateral in 3.
- Intraoperative complications occurred in 16 (36%) dogs: bleeding from the cavotomy or renal venotomy site (n=5), intraoperative cardiac arrest (4), vena caval tearing prior to or after venotomy closure (3), cardiac arrhythmias (3), incomplete thrombus removal due to adherence to caval wall (1).
- Histopathology: Pheochromocytoma (37/44), adrenocortical adenocarcinomas (7/44).
- Outcome: 34/45 dogs (76%) were discharged from the hospital and 11/44 dogs (24%) died or were euthanized prior to discharge.
- Median overall survival time for all 45 dogs was 547 days (95%CI 146 to 710). MST for 34 dogs that survived to discharge was 690 days (95%CI 323 to 1162).

Discussion
- Existing literature suggests that prognosis for resection of invasive adrenal neoplasia is often guarded.
- In this study in a cohort of dogs that all required a cavotomy for tumor removal 76% survived the perioperative period and long-term outcome in dogs that survived the procedure was favorable in most cases.
- It should be noted that all dogs in this study were operated by experienced surgeons operating in highly specialized centers.
- Surgical resection of invasive adrenal masses remains a reasonable option for management of this challenging disease process.