

TABLE 1: SUMMARY OF PATIENT SIGNALMENT, CLINICAL FINDINGS, AND BALLOON PROCEDURE, AND OUTCOME

DOG 1: 3 yo MC Yellow Labrador Retriever, 37.7 KG

Clinical Findings: Ascites, atrial fibrillation.
Approach: Jugular vein.
Outcome: Unable to pass exchange wire or balloon catheter through tricuspid valve orifice.

DOG 2: 1 yo FS Chocolate Labrador Retriever, 27.6 KG

Clinical Findings: Exercise intolerance, episodic weakness, ascites.
Approach: Right femoral vein.
Balloon size: 15 mm
Outcome: Right atrial pressure reduced from 30 mmHg to 22 mmHg.
Fewer episodes of episodic weakness (several times a day to occasionally with extreme excitement), but the mild amount of ascites present pre-BV remained.
Patient continued to do well 2 years post-operatively with no medical treatment.

Post Operative Medications: None

DOG 3: 5 yo FS Yellow Labrador Retriever, 33 KG

Clinical Findings: Exercise intolerance, tachypnea, episodic weakness, syncope (2 episodes per month), and ascites.
Approach: First procedure - jugular vein; second procedure - right femoral vein.
Balloon size: First procedure – 22 and 25 mm; second procedure - 16mm.
Outcome: Multiple balloon inflations were attempted but the balloon catheter never appeared to fully cross the valve and right atrial pressure was unchanged (20 mmHg). However, the ascites and clinical signs resolved post-operatively. Ascites redeveloped 406 d post BV. Repeat BV resulted in resolution of the ascites. Right atrial pressure decreased from 15 mmHg to 10 mmHg. The patient was euthanized 2 months later for unrelated reasons.

Post Operative Medications: Benazepril (0.45mg/kg PO BID), pimobendan (0.3mg/kg PO BID), furosemide (1.8mg/kg PO BID).

DOG 4: 2 yo MC Yellow Labrador Retriever, 34.4 KG

Clinical Findings: Pleural effusion and ascites.
Approach: First procedure – right jugular vein; Second procedure – right femoral vein.
Balloon size: First procedure - 18 mm; second procedure - 20 mm.
Outcome: Pleural effusion and ascites resolved post BV. Right atrial pressure decreased from 14 mmHg to 9 mmHg. The pleural effusion redeveloped 485d post BV. Repeat BV resulted in no significant reduction of right atrial pressure (15 mmHg to 14 mmHg). This patient was lost to follow-up.

Post Operative Medications: Furosemide 1mg/kg PO BID (second procedure).

DOG 5: 1 yo MC Black Labrador Retriever, 31.1 KG

Clinical Findings: Moderate tricuspid regurgitation (TR) but no right heart failure at presentation.
Approach: First procedure - Right jugular vein.
Second procedure - Left femoral vein.
Balloon size: 25 mm
Outcome: Right atrial pressure decreased from 20 mmHg to 16 mmHg. Severe TR and ascites developed post-BV and the dog was euthanized 160 d post BV due to refractory right heart failure.

Post Operative Medications: Furosemide 1mg/kg PO BID.

TABLE 2: SUMMARY OF PRE- AND POST-BALLOON VALVULOPLASTY TRICUSPID INFLOW ECHOCARDIOGRAPHIC MEASUREMENTS (PERFORMED IN AWAKE PATIENTS) AND RIGHT ATRIAL PRESSURE MEASUREMENTS (PERFORMED UNDER GENERAL ANESTHESIA).

DOG	TV Inflow Vmax – m/s (pre)	TV Inflow Vmean - m/s (pre)	RAP mmHg (pre)	VTI cm (pre)	TV Inflow Vmax – m/s (post)	TV Inflow Vmean – m/s (post)	RAP - mmHg (post)	VTI cm (post)
1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2	2.3	1.5	30	99.1	n/a	n/a	22	n/a
3 (#1)	2.8	1.7	20	79.8	1.8	1.3	20	54.8
3(#2)	n/a	n/a	15	n/a	n/a	n/a	10	n/a
4 (#1)	3.2	1.6	14	51.6	2.3	0.9	9	46.4
4 (#2)	3.1	1.4	15	42.4	2.2	1.0	10	43.5
5	2.9	1.5	20	92.9	1.9	1.4	16	41.4

TV – tricuspid valve; RAP – right atrial pressure; Vmax – maximum diastolic velocity (Doppler ultrasound); Vmean – mean diastolic velocity (Doppler ultrasound); #1 and #2 – first and second procedures