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## Case Study: Successful Treatment of Severe Pulmonic Stenosis in Snoop at Massachusetts Veterinary Referral Hospital

### Introduction

At Massachusetts Veterinary Referral Hospital (MVRH), we pride ourselves on providing exceptional care and advanced treatments for our animal patients. Our recent case involving Snoop, a lively canine diagnosed with severe pulmonic stenosis, highlights our commitment to veterinary excellence. This case study details Snoop's journey through diagnosis, treatment, and recovery, showcasing the expertise and dedication of our cardiology team. The team was led by [Ivan Sosa-Samper DVM ACVIM \(Cardiology\)](#).

### Background and Diagnosis

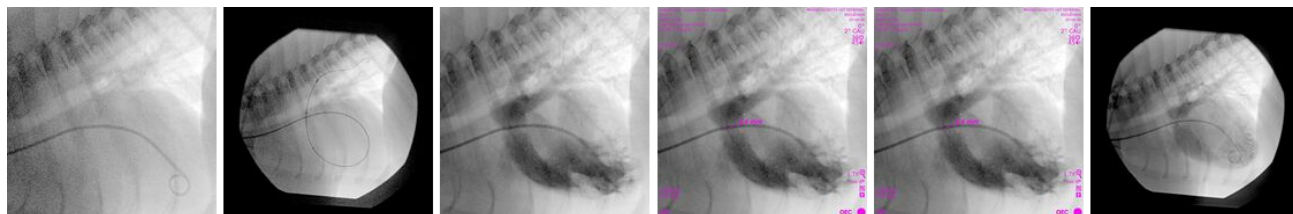
Snoop, a friendly and rambunctious dog, initially presented to the MVRH Cardiology Department with episodes of collapse and severe pulmonic stenosis, diagnosed through a comprehensive echocardiogram on October 25, 2023. Pulmonic stenosis is an obstruction to blood flow that happens because the valves of the pulmonic valve are fused, forcing the heart muscle to work extra to squeeze blood to the lungs. The echocardiogram revealed severe stenosis with a maximum pressure gradient (maxPG) 250 mmHg. To give an idea of the severity of the disease, dogs with a normal heart, have pressure gradients below 25mmHg, dogs with mild or moderate obstructions have pressures between 25-50, and 50-80mmHG, respectively, and dogs with severe obstructions have pressures over 80mmHg. Snoop was prescribed atenolol to help reduce the workload of the heart muscle, and was scheduled for a balloon valvuloplasty a few months later.

### Pre-Treatment Evaluation

Throughout the months leading to his balloon valvuloplasty, Snoop experienced various episodes and challenges. Notably, in February 2024, he was evaluated for swallowing seawater, which caused vomiting and shaking episodes. Despite these incidents, Snoop remained under vigilant care, with recommendations to restrict his activity and continue his medication regimen.

## Treatment: Balloon Valvuloplasty

On May 7, 2024, Snoop underwent a balloon valvuloplasty at MVRH. The procedure involved placing Snoop under general anesthesia and accessing the affected valve via the external right jugular vein. In order to gain access to the heart, a vascular introducer is first placed into the vein. This allows exchanging various wires and catheters without causing blood loss. Then, using fluoroscopy (Live X-rays) a catheter is advanced into the heart. This catheter has a small air balloon in its tip working as a “sail” and flowing downstream into the heart. Once the anatomy is assessed by using contrast, a Guide is placed to be used as a roadmap. Over this wire, a catheter with a large balloon in its tip is positioned across the fused valves. Once the balloon is inflated, the high pressures reached with this balloon separate the valve leaflets, decreasing the obstruction. This balloon reaches up to 18 atmospheres of pressure, and to put this in perspective, it is the equivalent of roughly stretching it with 260 pounds of force.



## Outcome and Recovery

Snoop's recovery was uneventful, with a marked decrease in the pressure gradient from 250 mmHg to 80 mmHg. Post-surgery, Snoop was prescribed a recovery regimen including atenolol, gabapentin, trazodone, and amoxicillin/clavulanate potassium to manage pain, sedation, and prevent infection. Owners were advised to monitor Snoop's sleeping respiratory rate and watch for any signs of disease progression, such as coughing or exercise intolerance.

## Follow-Up Care

A recheck echocardiogram was scheduled for 1-2 months post-procedure to monitor Snoop's heart pressures and overall health. MVRH extends a courtesy discount for rechecks within a year, emphasizing our commitment to affordable, high-quality care. Snoop's owners were reminded of the importance of continuing his medication and monitoring his health closely.

## Conclusion

Snoop's case exemplifies the advanced capabilities and compassionate care offered at Massachusetts Veterinary Referral Hospital. Through meticulous diagnosis, expert surgical intervention, and dedicated post-operative care, Snoop's severe pulmonic stenosis was effectively managed, allowing him to return to a healthier and happier life. At MVRH, we strive to ensure every pet receives the best possible care, and Snoop's successful treatment is a testament to our unwavering dedication to veterinary excellence.

## About MVRH

Massachusetts Veterinary Referral Hospital is a leading veterinary hospital providing advanced medical, surgical, and emergency care for pets. Our team of experienced veterinarians and specialists are dedicated to delivering compassionate and comprehensive care, ensuring the well-being of every animal we treat. Visit us online at [www.MassVetHospital.com](http://www.MassVetHospital.com) to learn more about our services and team.

**For more information or to schedule an appointment with our cardiology department, please contact us at (781) 932-5802.**

