Centesis (Fluid removal)





What is a centesis?

Centesis is a word used to described a minor procedure used to remove fluid from the body. Common reasons for your veterinarian to perform a centesis is for therapeutic purposes, such as removing large volumes of fluid from the chest or abdominal cavities to alleviate discomfort or stress, or for diagnostic purposes to attempt to gain fluid from a body cavity or organ to evaluate for testing. In cardiology, a centesis is usually used as an adjunct therapy to manage patients in congestive heart failure who develop large quantities or fluid in body cavities. Additionally, certain types of tumors which may grow on the heart may result in fluid accumulation around the heart. This fluid must be drained to maintain normal cardiac function in most individuals.

How is a centesis performed?

Generally, a centesis is performed on your patient in the awake state to avoid any detrimental effects of sedatives or anesthetic on an already potentially compromised heart. Fortunately, the vast majority of centeses represent relatively little pain to your pet. A local analgesic such as a lidocaine block is often used to reduce discomfort associated with fluid drainage. Depending on the location of fluid to be removed and size of your pet, fluid may be removed via a small needle introduced into the chest or abdominal cavities in small animals and fluid is removed until there is no further fluid flow. Alternatively, in the case of pericardial effusion (fluid around the heart), a longer catheter is often used to access the deeper structured of the sac surrounding the heart. Once access is made with either a needle or catheter, fluid may be removed under either syringe suction or active suction with a vacuum, depending on the volume anticipated.

What can I expect after a centesis?

Following centesis, animals generally return to normal activity within hours following the event. For animals where sedation is required to perform the procedure, they may appear disoriented or lethargic for up to a full 24 hours following the centesis. As we are creating a hole for fluid to drain out of a body cavity, there may be swelling and fluid tracking around the site of fluid removal for 24-48 hours following fluid removal. This may be helped with either cold compressions or placement of a mild compression wrap to help reduce fluid accumulation or bruising, however this does not represent a significant source of discomfort or concern for your pet. Repeat procedures may be recommended in the future depending on the case and cause of fluid accumulation.

What are the potential complications associated with centesis?

In the vast majority of cases, a centesis can be performed with minimal anxiety and pain to your pet and without any significant complications. Swelling of the site of fluid withdrawal and minor bruising are the most common minor complications associated with fluid removal. Pericardiocentesis may represent a unique risk in the location of fluid around the heart. Rare instances of malignant arrhythmias due to mechanical stimulation of the heart with catheters and other instrumentation, or even more rare penetration of a heart chamber with the catheter may result in excessive bleeding or need for medications to control arrhythmias. All patients undergoing pericardiocentesis are placed on continuous electrocardiographic monitoring and special precautions are taken to not irritate the heart (i.e. catheter introduced with ultrasound guidance, removal or catheter if there is significant risk to the patient). Additionally, fluid removed from the chest cavity may result in excessive air introduced into the chest cavity and need for additional procedures to remove the air, however this is uncommon in most clinical settings.

When performed by a skilled physician and with the appropriate precautions, a centesis may be performed on your pet with very little risk, and may improve the quality and quantity of life of your pet.