

Pericardiocentesis Information Sheet

General indications for the procedure: A needle or percutaneous pericardiocentesis is a procedure used to relieve the excessive pressure being placed on the heart due to accumulation of large amounts of fluid in the sac surrounding the heart. This procedure also allows for the possible diagnosis of a variety of disorders which could have predisposed the patient to developing the fluid accumulation in the sac around the heart. Therefore, the technique of needle pericardiocentesis can be both diagnostic and therapeutic.

Prior to the procedure: An echocardiogram or ultrasound of the heart must be done to prove the presence of effusion or fluid around the heart and to confirm that the fluid collection is at least moderately large and is free without areas of coagulation or loculation with the echocardiogram. The fluid collection will be evaluated for evidence that it is impairing cardiac function. Unless the procedure is considered very urgent, a clotting profile will be obtained and the results will be available before the procedure. Patients who are receiving anticoagulants will have these medications discontinued prior to the procedure.

Description of procedure: The procedure is done under imaging guidance, either fluoroscopy, which is x-ray guidance, or ultrasound guidance. While fluoroscopic or x-ray guidance is more common, echocardiographic guidance is becoming increasingly popular and is equally effective under the guidance of a skilled practitioner. The most common method of doing pericardiocentesis is the subcostal approach. Under this method, a needle is introduced at a chosen site below the rib cage. After the site is chosen, it is sterilized with an aseptic detergent and the tissues are then anesthetized using lidocaine. The puncture needle is then introduced below the ribs near the middle of the chest and directed towards the heart. Once the needle enters the space around the heart, a wire is introduced through the needle over which a drainage catheter is advanced and left in the pericardial space or sac around the heart. This catheter may be left in place for a period of several days to ensure that there has been adequate drainage of all the fluid which has accumulated around the heart. Once this has occurred, the catheter is pulled out and a dressing placed over the puncture site.

Risks of the procedure: Pericardiocentesis is almost always safe and effective. When performed by a skilled practitioner, major complications are rare. The most serious complication is laceration of a coronary vessel. Occasionally, inadvertent puncture of one of the chambers of the heart can occur. This puncture site must be repaired surgically.

Procedure alternatives if any: The alternative to needle pericardiocentesis is what is referred to as an open surgical pericardiotomy or surgical window. This is done in the operating room under various forms of anesthesia and has similar complication rates.

Probable consequences of refusing the procedure: If excessive fluid accumulates in the space around the heart the patient's life could be in jeopardy.

Person(s) performing the procedure: The key portions of the procedure will be performed by a physician who is a member of the medical staff of Rush University Medical Center and/or a fellow in the advanced training program in cardiovascular medicine who is observed by a full time faculty member who is a member of the medical staff. Cardiovascular medicine fellows are licensed physicians in approved post-residency training programs. Essential parts of the procedure which they perform are based on their level of competency.