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**Valvuloplasty**

**Other names:** Valvotomy

**What is valvuloplasty?**

Valvuloplasty is a procedure that uses the inflation of a balloon to increase the size of an opening of a heart valve.

**When is the procedure used?**

The procedure is used in certain circumstances when heart valve openings have been narrowed. Valvuloplasty is a relatively new procedure that is sometimes used as an alternative to traditional heart valve surgery. Valvuloplasty has been used to open stenosed (narrowed) mitral valves, aortic valves, and pulmonic valves.

**How is the procedure performed?**

After sedation and a local anesthetic, the procedure is done by the insertion of small hollow tube(s) or catheter(s), into blood vessel(s) of the leg. A catheter is carefully placed across the affected valve. In the case of repair of the mitral valve, a needle is used to make a small puncture in the septum (the wall separating the right and left atrium) and the balloon catheter is pushed over the needle into the left atrium, then it is positioned in the valve opening. A balloon on the end of the catheter is then inflated several times, enlarging the mitral valve opening.

**What are the risks of valvuloplasty:**

Medications: There may be allergic reactions or side effects to one or more medications used before, during or after the procedure. The x-ray dye used may cause allergic reactions or kidney failure. Blood thinners given during or after the procedure can cause severe bleeding complications.

Heart: There may be injury to the valve causing it to leak severely. This might require emergent heart surgery to repair or replace the valve. The procedure might be unsuccessful due to the inability to cross the valve or properly dilate it. There could be a tear or perforation of the heart requiring emergency surgery. Even if the valve is successfully treated, it may re-narrow over time requiring additional procedures. The heart's performance can be affected by the procedure causing low blood pressure or shock. Heart rhythm disturbances may occur. These might require medications, temporary pacemaker insertion, an electrical shock (cardioversion), or resuscitation (CPR). Rarely, death may occur as a complication of this procedure.

Vascular: The blood vessels and heart chambers into which the catheters are placed can be affected by blood clots, injury to the vessel wall, debris (emboli) and spasm. A

stroke could result from blood clots. Bleeding can occur from the puncture site or elsewhere and blood transfusions may be required. A bruise at the site of puncture is common. Injury to a nerve near the artery can lead to chronic pain at the puncture site. A swelling outside the artery (pseudoaneurysm) may require surgical correction. Infection can occur. Clots or debris can lead to stroke.

**What are the benefits of Valvuloplasty?**

The primary benefit of valvuloplasty in comparison to traditional heart valve surgery is the recovery period. Valvuloplasty usually requires only a very short hospital stay, and does not require general anesthesia. The cost to perform the procedure is considerably less than open-heart surgery.

**What are alternative treatments?**

Observation, medical treatment, valve surgery.