

## **Percutaneous Intervention of Heart Valvular Disease and Nursing Care**

**HN. Hyun Ju Song**

**Department of Coronary Care Unit**

**Seoul National University Hospital, Seoul, Korea**

Although valvular heart disease (VHD) is less common in industrialized countries than coronary artery disease (CAD), heart failure(HF), or hypertension, VHD is frequent and often requires intervention. Percutaneous Intervention besides open surgery of VHD is performed in hospital, so nursing care is needed according to Intervention.

- Aortic Stenosis(AS) - Transcatheter Aortic Valve Implantation
- Mitral Regurgitation(MR) - Percutaneous edge-to-edge mitral valve repair
- Mitral Stenosis(MS) - Percutaneous Balloon Mitral Valvuloplasty

Aortic stenosis and Mitral regurgitation are the most two common types of valvular disease. Transcatheter Aortic Valve Implantation(TAVI), also known as transcatheter aortic valve replacement (TAVR), is the replacement of the aortic valve of the heart through transfemoral, transapical, subclavian, direct aortic, transcaval. It is set up in the 2000s and is an alternative to surgical valve replacement in high-risk patients with aortic stenosis. Edwards Sapien, CoreValve, etc is introduced for TAVI. It is performed in the catheterisation laboratory under general anesthesia and needed post ICU care. The complications of TAVI are stroke, access site complications, conduction disturbance, atrial fibrillation, acute kidney injury, annular rupture and coronary occlusion. So it is important to monitor closely hemodynamic state, EKG change, temporary pacemaker function, access site complications and both DPP.

In percutaneous edge-to-edge mitral valve repair, right femoral vein is cannulated and a transseptal puncture is performed and then the MitraClip is advanced through the guide catheter into the left atrium. The survival rates were similar between percutaneous edge-to-edge mitral valve repair and mitral valve repair although residual MR and need of mitral reintervention were confirmed to be higher in the MitraClip group. Percutaneous Balloon Mitral Valvuloplasty approach the same way to the left atrium. Once the balloon catheter has been inserted into the left ventricle, the balloon is inflated. The catheter is then pulled until resistance is felt. Balloon valvotomy is used to increase the opening of a narrowed (stenotic) valve. It is used for this balloon valvotomy procedure can be performed on the mitral, tricuspid, aortic or pulmonary valves. The most common serious complication is hemopericardium to occur during the process of interatrial septum puncture.

As interventional cardiology expands, nurses must meet the new challenges and continue to expand and develop the unique nursing perspective in this field of patient care.