

Pulmonary Stenosis Balloon Valvuloplasty in Children

Samah Alasrawi* and Rabih Abdul Rahim

Pediatric Cardiologist, AlJalila Children's Hospital, Dubai, UAE

***Corresponding Author:** Samah Alasrawi, Pediatric Cardiologist, AlJalila Children's Hospital, Dubai, UAE.

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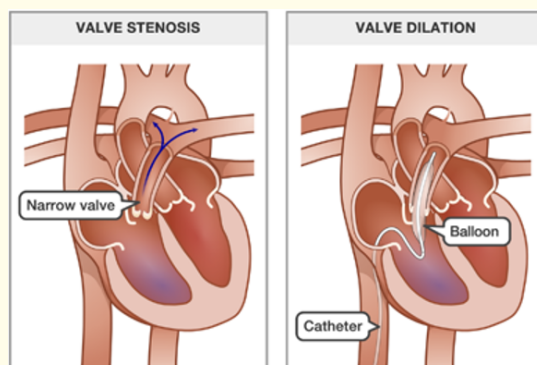
Abstract

Objectives: This paper provides information about procedure: Pulmonary Stenosis Balloon Valvuloplasty in Children, for the patient's parent, also it will help the pediatric cardiologist during explanation about the condition and the procedure:

- Identification of the procedure.
- Medical care pre, during and post the procedure.
- Risk factors of the procedure.

Conclusion: Pulmonary Stenosis Balloon Valvuloplasty in Children is a safe procedure with rare complications, will be done in the cardiac cath lab, and avoid the patient of the heart surgery

Keywords: Pulmonary Stenosis Balloon Valvuloplasty; Children; Pediatric Cardiologist



<https://www.aboutkidshealth.ca/Article?contentid=1669&language=English>

Figure

What is pulmonary stenosis balloon valvuloplasty?

Pulmonary valve stenosis is a heart disease when the pulmonary valve in the heart doesn't open fully. Pulmonary stenosis balloon valvuloplasty is a Cardiac Cath procedure to solve this problem. This procedure non-surgical treatment. Balloon valvuloplasty, is less invasive and the recovery is often shorter than open heart surgery, too [1].

The ventricles inside the heart are the bigger and lower chambers of the heart. The right ventricle connects to the pulmonary artery and pumps blood low in oxygen to the lungs. the pulmonary valve one of the heart's 4 valves, placed between the right ventricle and the pulmonary artery. In the normal child the pulmonary valve opens fully when the right ventricle contracts. It allows the blood to flow to the Lungs through the pulmonary artery [1-3].

Why might the child need pulmonary stenosis balloon valvuloplasty?

We have to do this procedure to relieve the symptoms of pulmonary valve stenosis. Sometimes the people who have the same

condition will not need valvuloplasty. Usually mild stenosis may not give any symptoms. But with a moderate to severe stenosis, he/she may have shortness of breath and tiredness at rest or with exercise [3,4].

At first your child may not have any symptoms. But he/she may have them later in childhood or adulthood [1,5].

What should the parents know before the pulmonary stenosis balloon valvuloplasty?

The parents must ask the healthcare provider how to get ready for the procedure. Follow any directions for not eating or drinking before the procedure. The child may also need to stop taking some medications before the cath [1,4,5].

The child may need some extra tests before the procedure, like:

- Chest X-ray: To show the structures in and around the chest.
- Electrocardiogram: To check the heart rhythm and rate.
- Blood tests: To check the general health and other systems.
- Echocardiogram: To check the heart function and anatomy [1,6].

What happens during pulmonary stenosis balloon valvuloplasty?

Cardiac catheterization lab is the place for this procedure. It is done by a doctor (pediatric cardiologist) and a team of specialized nurses and technicians. During the procedure, the vital signs will be monitored. In general:

- The child will be given medicine to make him/her not feeling any pain.
- A flexible thin tube (catheter) through the groin will be putted.

This tube has a balloon that expands on its end. Then the tube will be moved to the pulmonary valve. The cardiologist will inflate the balloon. This will stretch the valve leaflets to make the opening bigger. Once the valve has been opened enough, the balloon will be

deflated 2 or 3 times to get the best response. Then the balloon and catheters will be removed. A dressing will be applied on the groin area [1,2,4,6].

What happens after the procedure?

Your child will be attached to a cardiac monitor. For the first few hours after the procedure.

He/she will have stickers on the chest that will be wired up to the monitor. This allows us to monitor the heart rate and rhythm. Likewise we monitor the oxygen level in the blood using a small electrical sensor attached to your child's finger. After we have finished the procedure, your child will need to stay a further night in hospital.

Next morning, the child will have two heart scans known as an 'echo' and an 'ECG'. If all is good he/she can then be sent home [1,6].

After going home?

When the child goes home he/she should be back to full activity, within a week. We will schedule the child in the pediatric cardiology clinic for follow up one month after the procedure [1-4].

The complications of pulmonary stenosis valvuloplasty

Some possible complications of this procedure include:

- Bleeding
- Possibility of infection
- Blood clots and thrombus.
- Arrhythmias.
- Pulmonary artery tearing
- Perforating of the heart
- Pericardial effusion
- Pulmonary valve regurgitation
- Tricuspid valve regurgitation
- Recurrent pulmonary valve stenosis which may be followed by another valvuloplasty or surgery [1,5,6].

When should the parents call doctor or seek medical help?

If there is any cardiac symptoms like blueness of lips/face, loss of consciousness, chest pain, palpitation (fast heart beats), bleeding from groin, then the patient's parent should call the doctor [1,6].

Conclusion

Pulmonary Stenosis Balloon Valvuloplasty in Children is a safe procedure with rare complications, will be done in the cardiac cath lab, and avoid the patient of the heart surgery.

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