



Guidance document for PM JAY package

Sub-aortic membrane resection

Procedures covered/ Procedure Count: 1

Specialty: CTVS

| Package name | Procedure name | HBP 1.0 code | HBP 2.0 code | Package price (INR) | ALOS |
|---|-------------------------------|--------------|--------------|---------------------------|---------|
| Surgical Correction of Category - II Congenital Heart Disease | Sub-aortic membrane resection | New Package | SV0020 | 120,000 + Cost of implant | 10 days |

Minimum qualification of the treating doctor:

Essential: M.Ch./DNB/equivalent (Cardiothoracic Surgery)

Special empanelment criteria/linkage to empanelment module: Cardiothoracic Surgery OT

Disclaimer:

For monitoring and administering the claim management process of **Sub-aortic membrane resection**, NHA shall be following these guidelines. This document has been prepared for guidance of PROCESSING TEAM and TRANSACTION MANAGEMENT SYSTEM of AB PM-JAY for the claims of procedures mentioned above. The hospitals can also refer to this document so that they have the insight on how the claims will be processed. However, this document doesn't provide any guidance on clinical and therapeutic management of patient. In that respect the hospitals and physicians may refer to any other relevant material as per the extant professional norms.

PART I: GUIDELINES FOR CLINICIANS AND HEALTHCARE PROVIDERS

1.1 Objective:

The purpose of this section is to act as a guidance & a clinical decision support tool for the clinicians in deciding the line of treatment, plan clinical management of patient and decide referral of cases to the appropriate level of care (as required) for treatment of patients under PMJAY and selection of corresponding Health Benefit Package.

It will also serve as a tool for hospitals to determine and submit the mandatory documents required for claiming reimbursement of health benefit package under PMJAY.

1.2 Clinical key pointers:

Sub-valvular aortic stenosis (SAS), also called subaortic stenosis, is a rare disorder seen in infants. In most cases, there is a membrane (usually fibro-muscular) just below the aortic valve which causes a fixed obstruction to the blood flow across the left ventricular outflow tract. Despite being classified as a congenital heart defect, the fact that it is rare at birth and

infancy, its gradual course and its high rate of postoperative recurrence propose that it may be an acquired defect.

Clinical Features

Subaortic stenosis is usually detected at birth while working up the infant for another congenital heart disorder. Most infants are asymptomatic at birth or may have a murmur during evaluation. Among infants who are symptomatic, dyspnea on exertion, angina, effort syncope and presyncope, orthopnea and sudden cardiac death are commonly observed. Heart failure may be seen in infants with severe obstruction of the left ventricular outflow tract.

Exertional dyspnea is the most common symptom seen in 40% of symptomatic patients, and it reflects pulmonary venous hypertension that is induced by an increase in left ventricular filling pressure caused by the impaired diastolic compliance of the hypertrophied left ventricle.

The physical examination helps to distinguish from the other causes of left ventricular outflow tract obstruction.

- Children with sub-valvular aortic stenosis have a normal pattern of growth and development. Peripheral pulses are symmetrical except in cases of severe left ventricular outflow tract obstruction.
- One-third of the patients with mild sub-valvular aortic stenosis is noted to have a palpable carotid thrill and a left parasternal thrill. Patients with moderate to severe sub-valvular aortic stenosis have a forceful left ventricular apical impulse.
- During the first year of life, more than one-half of affected patients have a cardiac murmur. It becomes more prominent and typical of the left ventricular outflow tract obstruction as the patient gets older. A low-pitched ejection systolic murmur is appreciated in the second and third left parasternal spaces, and it radiates to the suprasternal notch. The duration of the murmur is directly proportional to the degree of obstruction.
- The ejection click is absent in isolated sub-valvular aortic stenosis and is an important differentiating point from the murmur of aortic valve stenosis.
- A high pitched early diastolic murmur of aortic regurgitation is heard in 30% to 50% of patients.
- The Valsalva maneuver decreases the intensity of the murmur in sub-valvular aortic stenosis.

Indications for Intervention

Surgical correction of the obstruction is the definitive therapy for the sub-valvular aortic stenosis. This may range from simple removal of the membrane (sub-aortic membrane resection) to extensive ring resection, with or without myectomy. The criteria and timing of

intervention for sub-valvular aortic stenosis are controversial. Early intervention in these patients is counterbalanced by the high postoperative incidence of recurrence, late reoperation and development of aortic regurgitation after relieving the obstruction.

- In children and adolescents with Doppler mean gradient of less than 30 mm Hg and no left ventricular hypertrophy, the management of sub-valvular aortic stenosis is nonintervention and medical follow up.
- In children and adolescents with Doppler mean gradient of 50 mm of Hg or more should be surgically treated
- In children and adolescents with Doppler mean gradients of 30 to 50 mm Hg, may be considered for surgery if they are symptomatic with angina, syncope, or dyspnea on exertion if they are asymptomatic but develop changes on ECG at rest or with exercise or older age at diagnosis.
- Prevention of aortic regurgitation alone is generally not a criterion for surgery. However, the progression and worsening of regurgitation to a significant grade is an indication for surgery.

1.3 Mandatory documents- For healthcare providers

Following documents should be uploaded by the concerned hospital staff at the time of pre-authorization and claims submission

| Mandatory document | Sub-aortic membrane resection |
|--|-------------------------------|
| i. At the time of Pre-authorization | |
| a. Clinical notes | Yes |
| b. Echo/Doppler report | Yes |
| ii. At the time of claim submission | |
| a. Indoor case papers | Yes |
| b. Procedure / Operative notes | Yes |
| c. Post procedure stills of ECHO with report | Yes |
| d. Detailed Discharge Summary | Yes |

PART II: GUIDELINES FOR PROCESSING TEAM

PART III: GUIDELINES FOR TRANSACTION MANAGEMENT SYSTEM (TMS)

3.1 Objective: To enable setting up of cross check mechanisms/rule engines within the IT platform (TMS) to ensure compliance with STGs and to prevent fraud / abuse of the Health Benefit Package.

3.2 Below mentioned are the scenarios where a provision would be built in TMS for pop-ups:



1. Was the Echo/ Doppler report suggestive of Subvalvular Aortic Stenosis? Yes

Till the time the functionality is being developed, the processing doctors shall check the above manually.

References

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2. Mavroudis C, Backer C. Pediatric cardiac surgery. Blackwell Publishing Ltd; 2013 Feb 28.
3. Mulla S, Siddiqui WJ. Subaortic Stenosis. [Updated 2020 Jan 29]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-.
4. Karamlou T, Gurofsky R, Bojcevski A, Williams WG, Caldarone CA, Van Arsdell GS, Paul T, McCrindle BW. Prevalence and associated risk factors for intervention in 313 children with subaortic stenosis. Ann. Thorac. Surg. 2007 Sep;84(3):900-6; discussion 906
5. Rohlicek CV, del Pino SF, Hosking M, Miro J, Côté JM, Finley J. Natural history and surgical outcomes for isolated discrete subaortic stenosis in children. Heart. 1999 Dec;82(6):708-13