



Guidance document for PM JAY package

Thoracoabdominal Aneurysm

Procedures covered: 1

Specialty: CTVS, General Surgery

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)
Aortic Arch Replacement / Thoracoabdominal aneurysm Repair using bypass	Thoracoabdominal aneurysm Repair using bypass	New Package	SV015B	1,50,000 + graft cost

ALOS: 12 days

Minimum qualification of the treating doctor:

Essential: MCh/DNB/Equivalent (in Cardiothoracic Surgery, Vascular Surgery)

Special empanelment criteria/linkage to empanelment module: Care at a Tertiary Hospital with equipped facilities for bypass

Disclaimer:

For monitoring and administering the claim management process of **Thoracoabdominal aneurysm Repair using bypass**, 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:

Thoracoabdominal aneurysms (TAAs) develop in patients with atherosclerotic disease, chronic aortic dissection, and connective tissue disorders (e.g., Marfan syndrome, Ehler-Danlos syndrome). Pathologic processes include chronic inflammation, remodeling of extracellular matrix, and depletion of vascular smooth muscle cells. Elastin depletion in the media layer of the aortic wall is a common finding.

Clinical features

- Approximately 80 percent of TAAs are atherosclerotic in nature, associated with smoking, hypertension, hypercholesterolemia, and advanced age.
- Approximately 20 percent of TAAs develop from chronic aortic dissections and occur in patients with connective tissue disorders. The risk of rupture increases rapidly when aneurysmal diameter reaches or exceeds 6 cm.
- The most common presentation includes abdominal or back pain, although many TAAs are also discovered incidentally.

Classification

TAAs usually are classified according to the anatomic scheme developed by Modified Crawford classification:

- Type I – TAA begins in the proximal thoracic aorta and extends to the level of the celiac artery.
- Type II – TAA is the most extensive variety, generally involves the entire thoracic and abdominal aorta, and accounts for a large proportion of TAAs that develop years after an extensive aortic dissection.
- Type III – TAA is defined by its proximal extent in the midthoracic aorta, generally is described in the region of the T6 vertebra or the inferior pulmonary vein, and may involve varying amounts of the abdominal aorta.
- Type IV – TAA begins above the celiac axis and extends into the infrarenal aorta.
- Type V – TAA, which begins in the mid-descending thoracic aorta and terminates at the level of the renal arteries

Diagnostics

- TAAs are classified commonly according to the anatomic scheme developed by Crawford (types I through V).
- Helical computed tomography and magnetic resonance angiography are the diagnostic modalities of choice, largely having supplanted angiography.

Treatment

- Medical therapy includes the reduction of risk factors for aneurysmal expansion (e.g., smoking, hypercholesterolemia) and tight blood pressure control predicated on the use of beta-blockers.
- Interventional therapy includes open surgical, hybrid and totally endovascular repair. Spinal cord protection is of particular concern in all methods of repair.

Complications

- Common postoperative complications include bleeding, respiratory failure, myocardial infarction or cardiac failure, renal failure, and paraplegia.

- Operative risk increases with advanced age, aneurysm complexity, emergency operation, coronary and cerebrovascular disease, pulmonary disease, and renal failure.

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	Thoracoabdominal aneurysm Repair using bypass
i. At the time of Pre-authorization	
Clinical notes including evaluation findings, indication of graft requirement, and planned line of management	Yes
Chest Xray	Yes
Electrocardiogram (ECG)	Yes
2D ECHO	Yes
Transthoracic Echocardiogram (TTE)	Yes
CT/MRI/ Angiography	Yes
Lung function test	Yes
Serum Urea and creatinine	Yes
Optional based on Etiology Coronary angiography Aortography Duplex scan	Yes
ii. At the time of claim submission	
Detailed Indoor case papers (ICPs)	Yes
Detailed Procedure / Operative notes	Yes
Clinical Evaluation of the brain function during the procedure (Intra-operative monitoring documentation)	Yes
Intra-operative monitoring (optional) Near infrared spectroscopy (NIRS)	Yes
Electroencephalography (EEG) (optional)	Yes
Graft details - barcode/invoice (if artificial graft used)	Yes
Post-op investigations - Chest X-ray/2DECHO - CT scan (optional)	Yes
Detailed Discharge Summary	Yes

PART II: GUIDELINES FOR PROCESSING TEAM

2.1 Objective: To provide guidance to the pre-authorization and claims processing team in ascertaining the medical necessity of procedure carried out vis a vis the patient's medical

condition as evidenced by supporting documents/investigation reports etc., in deciding the admissibility and quantum of claim and compliance with mandatory documents by the hospital.

2.2 Following mandatory documents to be diligently reviewed by the pre-auth / claims processing personnel:

2.2.1 At the time of pre-authorization processing- For pre-authorization processing doctor (PPD):

- a. Clinical notes – all vitals, symptoms, signs, physical examination, indication for procedure, and planned line of treatment.
- b. Did the clinical condition and imaging confirm the diagnosis?

2.2.2 At the time of claim processing- For claims processing doctor (CPD)

- a. Are the detailed ICPs with daily vitals and treatment details?
- b. Are the detailed procedure / Operative Notes available?
- c. Does the severity and imaging indicate surgery?
- d. Was graft detail (barcode/invoice) available in case of artificial graft?
- e. Is the Discharge summary with follow-up advise at the time of discharge?

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:

- I. Was the clinical condition, severity, and imaging indicative of surgery? Yes

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

References

1. David D. Yuh, Luca A. Vricella, et al. John Hopkins Textbook of Cardiothoracic Surgery. Second Edition. 2014. Mc Graw Hill Education.
2. Kouchoukos NT. Thoracoabdominal aortic aneurysm repair using hypothermic cardiopulmonary bypass and circulatory arrest. *Ann Cardiothorac Surg.* 2012;1(3):409-411. doi:10.3978/j.issn.2225-319X.2012.08.09
3. Ouzounian, M., LeMaire, S. A., Weldon, S., & Coselli, J. S. (2018). *Open Repair of Thoracoabdominal Aortic Aneurysm: Step-by-Step. Operative Techniques in Thoracic and Cardiovascular Surgery.* doi:10.1053/j.optechstcvs.2018.07.002