



Guidance document for processing PM-JAY packages

Carotico-cavernous Fistula

Procedures covered: 2

Specialty: Interventional Neuroradiology

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)
Carotico-cavernous Fistula (CCF) embolization	Carotico-cavernous Fistula (CCF) embolization with coils. [includes 5 coils, guide catheter, micro-catheter, micro-guidewire, general items]	S900005	IN004A	30,000 + Implant cost
Carotico-cavernous Fistula (CCF) embolization	Carotid-cavernous Fistula (CCF) embolization with balloon. (includes one balloon, guide catheter, micro-catheter, micro-guidewire, general items)	S900006	IN004B	64,000 + Implant cost

ALOS: 5 days

Minimum qualification of the treating doctor:

Essential: DM/Equivalent (in Interventional Neuroradiology), MCh/DNB/Equivalent (in Neurosurgery)

Special empanelment criteria/linkage to empanelment module: Care at Tertiary Hospital

Disclaimer:

For monitoring and administering the claim management process of **Carotico-cavernous Fistula (CCF) embolization**, 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:

Carotid cavernous fistula (CCF) is an abnormal communication between the internal carotid artery (ICA) and the cavernous sinus.

- Types
 - Direct CCF are often secondary to trauma (head trauma)
 - Presentation: acute/rapid
 - Indirect CCF are often post-menopausal
 - Presentation: Insidious
- Classification (Barrow classification characterizes fistulas according to angiographic features)
 - **Type A:** direct connection between the intracavernous internal carotid artery and cavernous sinus
 - **Type B:** dural shunt between intracavernous branches of the internal carotid and cavernous sinus
 - **Type C:** dural shunts between meningeal branches of the external carotid artery and cavernous sinus
 - **Type D:** type B + type C

Clinical features

- Pulsatile proptosis
- Cranial nerve palsy (III, IV, Vc, VI)
- Loss of consciousness
- Progressive visual loss
- Headache
- Vomiting
- Neurodeficit
- Chemosia
- Raised intracranial pressure
- Tinnitus
- Subarachnoid hemorrhage, intracerebral hemorrhage, otorrhagia, epistaxis

Management

- The goal of treatment is to obliterate the fistula which can be accomplished with a wide variety of techniques and agents



- The treatment of CCF takes into consideration the speed of flow through the fistula, its arterial supply, and the routes of venous drainage
- Equally important is to take into consideration the general physical condition of the patient prior to formulating a therapeutic plan

Endovascular Therapy

- Endovascular management is the mainstay of treatment for patients that fail or are not suitable for conservative management and compression therapy
- This therapy is performed trans-arterially and/or trans-venously
- Direct Fistula
 - Trans-arterial therapy
 - Detachable balloon occlusion
 - Trans-arterial coil and material embolization
 - Covered stent graft placement
 - Parent artery occlusion
 - Transvenous treatment
 - Transvenous detachable coil embolization
 - Liquid embolizing agents
- Indirect fistula
 - Trans-arterial therapy
 - Trans-arterial coil and material embolization
 - Transvenous treatment
 - Transvenous detachable coil embolization
 - Liquid embolizing agents

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	Carotico-cavernous Fistula (CCF) embolization with coils/balloon
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i. At the time of Pre-authorization	
Clinical notes including evaluation findings, indication of implant requirement and planned line of treatment	Yes
Clinical photograph of the affected eye	Yes
CT/MRI Brain	Yes
Digital subtraction angiography (DSA)	Yes
Complete Blood Count, Creatinine, Prothrombin Time/INR	Yes
Optional Orbital ultrasound IVUS (intravascular ultrasound) monitoring	Yes
ii. At the time of claim submission	
Detailed Indoor case papers (ICPs)	Yes
Detailed Procedure / operative notes	Yes
Intra-operative photographs (optional)	Yes
Check Angiogram report	Yes
CT Brain (optional depending on clinical condition)	Yes
Implant details (invoice/barcode)	Yes
Detailed discharge summary	Yes

PART II: GUIDELINES FOR PROCESSING TEAM

PART III: GUIDELINES FOR IT

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:

- Was clinical presentation, history and imaging indicative of surgery? Yes

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

References

- Standard Treatment Guidelines. Interventional Radiology. Health & Family Welfare Department. Government of Maharashtra
- James Vincent Byrne. Tutorials in Endovascular Neurosurgery and Interventional Neuroradiology. Second Edition. 2017. Springer



3. Korkmazer B, Kocak B, Tureci E, Islak C, Kocer N, Kizilkilic O. Endovascular treatment of carotid cavernous sinus fistula: A systematic review. *World J Radiol.* 2013;5(4):143-155. doi:10.4329/wjr.v5.i4.143