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2024 Magnetic Resonance Angiography (MRA) Spinal Canal

Diagnostic Imaging

P_11740

Last Review Date: 10/28/2024
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Guideline Initiated: 06/30/2019

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Magnetic Resonance Angiography (MRA) Spinal Canal

NCD 220.2
See also, **NCD 220.2**: Magnetic Resonance Imaging at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

MRA Contraindications

An MRA may be contraindicated for **ANY** of the following:

- Safety, related to clinical status (eg, body mass index exceeds MR capability, intravascular stents within recent 6 weeks)
  References: [4] [15] [9] [6] [2]
- Safety, related to contrast (eg, allergy, renal impairment)
  References: [4] [15] [9] [6] [2]
- Safety, related to implanted devices (aneurysm clip, cochlear implant, insulin pump, spinal cord stimulator)
  References: [4] [15] [9] [6] [2]

IMPORTANT
Some implanted devices that were once absolute contraindications to a MRI, may now be accepted. Considerations include if the MRI is able to accommodate the device, or the device is deemed safe for MRI.

Preamble: Pediatric Diagnostic Imaging

HealthHelp's clinical guidelines for the Diagnostic Imaging program, are intended to apply to both adults and pediatrics (21 years of age or younger), unless otherwise specified within the criteria.

MRA Spinal Canal Guideline

Magnetic resonance angiography (MRA) of the spinal canal is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. Arteriovenous malformation (AVM) in the spinal canal, for evaluation.
   References: [14] [5] [7] [11] [3]

2. Myelopathy is known and compromise of blood flow or drainage to the spinal cord is suspected.
   References: [14] [5] [7] [11] [17]
3. Pre-procedural evaluation or post-surgical assessments for evaluation of complications or disease recurrence
4. PriorMRA spinal canal imaging is non-diagnostic or indeterminate. (*__NOTE__: *One follow-up is appropriate to evaluate for changes since preceding imaging finding[s]. Further surveillance is appropriate when lesion is specified as "highly suspicious" or there is a change since last exam.*)
5. Spinal dural arteriovenous fistula is suspected based on prior imaging.
   References: [14] [5] [7] [16] [12]
6. Vascular pathology (compression or thrombosis) compromising spinal cord blood flow or venous drainage is suspected, **AND** disc herniation, fracture of the cervical spine, infection or venous thrombosis are known.
   References: [14] [5] [7] [8]
7. Vertebral artery injury is suspected or known **AND** vascular compromise to the spinal canal and its contents are suspected.
   References: [14] [5] [7] [13] [10]

LCD 33633
See also, **LCD 33633**: Magnetic Resonance Angiography (MRA) at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

MRA Spinal Canal Procedure Codes

Table 1. MRA Spinal Canal Associated Procedure Codes

CODE	DESCRIPTION
72159	Magnetic resonance angiography, spinal canal and contents, with or without contrast material(s)
C8931	Magnetic resonance angiography with contrast, spinal canal and contents
C8932	Magnetic resonance angiography without contrast, spinal canal and contents
C8933	Magnetic resonance angiography without contrast followed by with contrast, spinal canal and contents

MRA Spinal Canal Summary of Changes

MRA Spinal Canal guideline had the following version changes from 2023 to 2024:

- Added "Prior MRA spinal canal imaging" to keep in line with current research.
- Mid-cycle update: added Pediatric Preamble
- Mid-cycle update: removed LCD 34372 as it was retired from CMS

MRA Spinal Canal Definitions

Aneurysm refers to weakness in an artery wall, allowing it to abnormally balloon out or widen.
Arteriovenous fistula (AVF) is an abnormal connection between an artery and a vein. It happens when one or more arteries are directly connected to one or more veins or venous spaces called sinuses.
Arteriovenous malformation (AVM) are congenital high-flow vascular malformations characterized by abnormal shunting of blood from high-flow feeding arteries to low-resistance veins via a cluster of aberrant blood vessels termed a central nidus, bypassing the normal capillary bed.
Compression is reducing in size, quantity or volume, as if by squeezing.
Disc herniation, also known as a slipped, ruptured or bulged disc, occurs when a fragment of the disc nucleus is forced through a tear or rupture in the annulus. This can put pressure on the spinal cord or nearby nerves.
Magnetic resonance angiogram (MRA) is a test that uses a magnetic field and pulses of radio wave energy to provide images of blood vessels inside the body, allowing for evaluation of blood flow and blood vessel wall condition. MRA is used to look for aneurysms, clots, tears in the aorta, arteriovenous malformations and stenosis caused by plaque in the carotid arteries (neck) or blood vessels leading to the lungs, kidneys or legs.
Myelopathy is a disease or disorder of the spinal cord or bone marrow.
Pediatric approximate ages are defined by the US Department of Health (USDH), the Food and Drug Administration (FDA), and the American Academy of Pediatrics (AAP) as the following:

- Infancy, between birth and 2 years of age
- Childhood, from 2 to 12 years of age
- Adolescence, from 12 to 21 years of age, further defined by the AAP into:
    1. Early (ages 11–14 years)
    2. Middle (ages 15–17 years),
    3. Late (ages 18–21 years)
    4. Older ages may be appropriate for children with special healthcare needs.

Thrombosis is the formation of a blood clot (partial or complete blockage) within blood vessels, whether venous or arterial, limiting the natural flow of blood and resulting in clinical sequela.

MRA Spinal Canal References

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Purpose

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Clinician Review

These clinical guidelines neither preempt clinical judgment of trained professionals nor advise anyone on how to practice medicine. Healthcare professionals using these clinical guidelines are responsible for all clinical decisions based on their assessment. All Clinical Reviewers are instructed to apply clinical indications based on individual patient assessment and documentation, within the scope of their clinical license.

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