

Medical Review Guidelines Magnetic Resonance Angiography

Medical Guideline Number: MRG2001-05

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OHCA Reference OAC 317:30-5-24. Radiology. (f) *Magnetic Resonance Imaging.* MRI/MRA scans are covered when medically necessary. Documentation in the progress notes must reflect medical necessity for the MRI.

Description

Magnetic Resonance Angiography (MRA) is an application of magnetic resonance (MR) imaging providing visualization of blood flow, as well as images of normal and diseased blood vessels. MRA techniques are typically noninvasive because they do not require the use of contrast media. While contrast media may sometimes be used to enhance the images obtained in MRA, the use of these agents is not necessary. As a result, MRA is an attractive imaging alternative for patients who cannot tolerate contrast media.

Although MRA may be performed on several different anatomical regions, presently available scientific data and studies reveal the most clinically useful application of MRA is in the evaluation of blood flow and vessels in the head and neck. Additionally, studies proved MRA is most effective when evaluating large vessels, such as carotids, which are located in the area of the head and neck.

Evolving data also demonstrates usefulness in evaluations of vascular disease in the lower extremities. Studies have shown that MRA of the chest has high level of diagnostic accuracy for pre-operative and post-operative evaluation of aortic dissection of aneurysm and for diagnosing a suspected pulmonary embolism when it is contraindicated for the patient to receive intra vascular iodinated contrast material. Studies have also shown that MRA of the abdomen are reliable for the pre-operative evaluation of patients who will under go elective abdominal aortic aneurysm repair.

HCPCS CODES – Magnetic Resonance Angiography - MRA

70544-70549	MRA HEAD AND/OR NECK
094.87	Syphilitic ruptured cerebral aneurysm
191.0	Malignant neoplasm of brain, cerebrum, except lobes and ventricles
191.1	Malignant neoplasm of brain, frontal lobe
191.2	Malignant neoplasm of brain, temporal lobe
191.3	Malignant neoplasm of brain, parietal lobe
191.4	Malignant neoplasm of brain, occipital lobe
191.5	Malignant neoplasm of brain, ventricles
191.6	Malignant neoplasm of brain, cerebellum
191.7	Malignant neoplasm of brain, brain stem
191.8	Malignant neoplasm of brain, other parts of brain
191.9	Malignant neoplasm of brain, unspecified
192.1	Malignant neoplasm of cerebral meninges
194.4	Malignant neoplasm of pineal gland
194.5	Malignant neoplasm of carotid body
194.6	Malignant neoplasm of aortic body and other paraganglia
225.0	Benign neoplasm of brain
225.1	Benign neoplasm of cranial nerves

225.2	Benign neoplasm of cerebral meninges
227.3	Benign neoplasm of pituitary gland and craniopharyngeal duct
227.4	Benign neoplasm of pineal gland
227.5	Benign neoplasm of carotid body
228.02	Hemangioma of intracranial structures
237.5	Neoplasm of uncertain behavior of brain and spinal cord
237.6	Neoplasm of uncertain behavior of meninges
325	Phlebitis and thrombophlebitis of intracranial venous sinuses
368.11	Sudden visual loss
368.12	Transient visual loss
368.40	Visual field defect, unspecified
368.46	Homonymous bilateral field defects
368.47	Heteronymous bilateral field defects
377.01	Papilledema associated with increased cranial pressure
377.04	Foster-Kennedy syndrome
377.42	Hemorrhage in optic nerve sheaths
377.51	Disorders of optic chiasm associated with pituitary neoplasms and disorders
377.52	Disorders of optic chiasm associated with other neoplasms
377.53	Disorders of optic chiasm associated with vascular disorders
377.61	Disorders of other visual pathways associated with neoplasms
377.62	Disorders of other visual pathways associated with vascular disorders
377.71	Disorders of visual cortex associated with neoplasms
377.72	Disorders of visual cortex associated with vascular disorders
386.2	Vertigo of central origin
388.30	Tinnitus, unspecified
388.31	Subjective tinnitus
388.32	Objective tinnitus
430	Subarachnoid hemorrhage
431	Intracerebral hemorrhage
432.0	Nontraumatic extradural hemorrhage
432.1	Subdural hemorrhage
432.9	Unspecified intracranial hemorrhage
433.00	Occlusion and stenosis of basilar artery, without mention of cerebral infarction
433.01	Occlusion and stenosis of basilar artery, with cerebral infarction
433.10	Occlusion and stenosis of carotid artery, without mention of cerebral infarction
433.11	Occlusion and stenosis of carotid artery, with cerebral infarction
433.20	Occlusion and stenosis of vertebral artery, without mention of cerebral infarction
433.21	Occlusion and stenosis of vertebral artery, with cerebral infarction
433.30	Occlusion and stenosis of multiple and bilateral precerebral arteries, without mention of cerebral infarction
433.31	Occlusion and stenosis of multiple and bilateral precerebral arteries, with cerebral infarction
433.80	Occlusion and stenosis of other specified precerebral arteries, without mention of cerebral infarction
433.81	Occlusion and stenosis of other specified precerebral arteries, with cerebral infarction
433.90	Occlusion and stenosis of unspecified precerebral arteries, without mention of cerebral infarction
433.91	Occlusion and stenosis of unspecified precerebral arteries, with cerebral infarction
434.00	Cerebral thrombosis, without mention of cerebral infarction

434.01	Cerebral thrombosis, with cerebral infarction
434.10	Cerebral embolism, without mention of cerebral infarction
434.11	Cerebral embolism, with cerebral infarction
434.90	Cerebral artery occlusion, unspecified, without mention of cerebral infarction
434.91	Cerebral artery occlusion, unspecified, with cerebral infarction
435.0	Basilar artery syndrome
435.1	Vertebral artery syndrome
435.2	Subclavian steal syndrome
435.3	Vertebrobasilar artery syndrome
436	Acute, but ill-defined cerebrovascular disease
437.3	Cerebral aneurysm, nonruptured
442.81	Aneurysm of artery of neck
444.0	Arterial embolism and thrombosis of abdominal aorta
444.1	Arterial embolism and thrombosis of thoracic aorta
444.21	Arterial embolism and thrombosis of arteries of the upper extremity
444.22	Arterial embolism and thrombosis of arteries of the lower extremity
444.81	Arterial embolism and thrombosis of Iliac artery
444.89	Arterial embolism and thrombosis of other specified artery
444.9	Arterial embolism and thrombosis of unspecified artery
447.0	Arteriovenous fistula, acquired
747.81	Anomalies of cerebrovascular system
753.13	Polycystic kidney, autosomal dominant
781.4	Transient paralysis of limb
784.2	Swelling, mass or lump in head or neck
900.00	Injury to carotid artery, unspecified
900.01	Injury to common carotid artery
900.02	Injury to external carotid artery
900.03	Injury to internal carotid artery
900.82	Injury to multiple blood vessels of head and neck
900.89	Injury to other specified blood vessels of head and neck
908.3	Late effects of injury to blood vessels of head, neck, and extremities
71555	MRA CHEST
093.0	Aneurysm of aorta, specified as syphilitic
415.0	Acute cor pulmonale
415.11	Iatrogenic pulmonary embolism and infarction
415.19	Other pulmonary embolism and infarction
417.1	Aneurysm of pulmonary artery
441.01	Dissection of aorta, thoracic
441.03	Dissection of aorta, thoracabdominal
441.2	Thoracic aneurysm without mention of rupture
441.7	Thoracoabdominal aneurysm, without mention of rupture
441.9	Aortic aneurysm of unspecified site without mention of rupture
73725	MRA LOWER EXTREMITY
250.70	Diabetes with peripheral circulatory disorders, Type II or unspecified, not stated as uncontrolled

250.71	Diabetes with peripheral circulatory disorders, Type I (juvenile type), not stated as uncontrolled
250.72	Diabetes with peripheral circulatory disorders, Type II or unspecified, uncontrolled
250.73	Diabetes with peripheral circulatory disorders, Type I (juvenile type), uncontrolled
440.21	Atherosclerosis of extremities with intermittent claudication
440.22	Atherosclerosis of extremities with rest pain
440.30	Atherosclerosis of bypass graft of the extremities, unspecified graft
440.31	Atherosclerosis of bypass graft of the extremities, autologous vein bypass graft
440.32	Atherosclerosis of bypass graft of the extremities, nonautologous biological bypass graft
442.3	Other aneurysm of artery of lower extremity
443.1	Thromboangitis obliterans (Buerger's disease)
443.81	Peripheral angiopathy in diseases classified elsewhere
444.22	Arterial embolism and thrombosis, lower extremity
444.81	Arterial embolism and thrombosis of iliac artery
447.1	Stricture of artery
447.5	Necrosis of artery
904.0	Injury to common femoral artery
904.1	Injury to superficial femoral artery
904.41	Injury to popliteal artery
904.51	Injury to anterior tibial artery
904.53	Injury to posterior tibial artery
74185, 72198	MRA ABDOMEN, PELVIS
189.0	Malignant neoplasm of kidney, except pelvis
189.1	Malignant neoplasm of renal pelvis
189.8	Malignant neoplasm of other specified sites of urinary organs
401.0	Essential hypertension, malignant
402.00	Malignant hypertensive heart disease, without heart failure
402.01	Malignant hypertensive heart disease, with heart failure
403.00	Malignant hypertensive renal disease, with chronic kidney disease stage I through stage IV, or unspecified
403.01	Malignant hypertensive renal disease, with chronic kidney disease stage V or end stage renal disease
404.00	Malignant hypertensive heart and renal disease, without heart failure and with renal disease stage I through IV, or unspecified
404.01	Malignant hypertensive heart and renal disease, with heart failure and with renal disease stage I through IV, or unspecified
404.02	Malignant hypertensive heart and renal disease, without heart failure and with renal disease stage V or end stage renal disease
404.03	Malignant hypertensive heart and renal disease, with heart failure and with renal disease stage V or end stage renal disease
405.01	Secondary hypertension, malignant, renovascular
440.1	Atherosclerosis of renal artery
441.02	Dissection of abdominal aorta
441.03	Dissection of thoracoabdominal aorta
441.4	Abdominal aneurysm without mention of rupture
441.7	Thoracoabdominal aneurysm, without mention of rupture
441.9	Aortic aneurysm of unspecified site without mention of rupture

442.1	Other aneurysm of renal artery
443.22	Dissection of iliac artery
443.23	Dissection of renal artery
444.0	Arterial embolism and thrombosis of abdominal aorta
445.81	Atheroembolism of kidney
447.3	Hyperplasia of renal artery
557.0	Acute vascular insufficiency of intestine
866.00	Injury to kidney, without mention of open wound into cavity, unspecified injury
866.01	Injury to kidney, without mention of open wound into cavity, hematoma without rupture of capsule
866.02	Injury to kidney, without mention of open wound into cavity, laceration
866.03	Injury to kidney, without mention of open wound into cavity, complete disruption of kidney parenchyma
866.10	Injury to kidney, with open wound into cavity, unspecified injury
866.11	Injury to kidney, with open wound into cavity, hematoma without rupture of capsule
866.12	Injury to kidney, with open wound into cavity, laceration
866.13	Injury to kidney, with open wound into cavity, complete disruption of kidney parenchyma
902.40	Injury to renal vessel, unspecified
902.41	Injury to renal artery
902.49	Injury to other blood vessels (suprarenal arteries)
902.53	Injury to iliac artery
996.74	Other complications due to other vascular device, implant and graft
996.81	Complications of transplanted kidney
996.86	Complications of transplanted pancreas
997.72	Vascular complications of renal artery

HCFA has determined that readily acceptable scientific data are lacking for applications of MRA other than those listed above.

Indications and Limitations of Coverage and/or Medical Necessity

MRA is still considered investigational for many body areas. MRA for spinal canal and upper extremities are covered only by prior authorization.

MRA of the head and neck will be covered when all the following conditions are met:
The MRA is performed for the evaluation of the Carotid Vessels in the head and neck;
The MRA is performed on patients with vascular conditions of the head and neck, such as carotid stenosis, for which surgery is anticipated and may be found appropriate, based on the MRA test results; and MRA and contrast angiography are not expected to be performed on the same patient for diagnostic purposes prior to the application of anticipated therapy. If both tests are performed the physician should clearly document the medical necessity for this in the medical records.

OHCA will provide coverage for MRA of the abdomen and pelvis:
As a reliable diagnostic tool for the pre-operative evaluation of patients who will undergo elective abdominal aortic aneurysm (AAA) repair and to determine the extent of AAA. In addition, as evaluation of aortoiliac occlusion disease and renal artery pathology that may be necessary in the surgical planning for AAA repair.

MRA of the abdomen is covered for these diagnostic applications only as a substitute for contrast angiography, except when it is medically necessary to perform both tests.

MRA is considered investigational for measurement of blood flow and spectroscopy. These procedures are not covered.

Contraindications

1. Patients with cardiac pacemakers or metallic clips on vascular aneurysms or other metallic implants.
2. Patients requiring life support systems and monitoring devices which employ Ferro magnetic materials (metal that could be magnetized).
3. Patients who have claustrophobia.
4. Patients who have ferrous ocular foreign bodies, imbedded shrapnel fragments or cochlear implants.
5. Patients who are pregnant.
6. Patients who may require resuscitation.

Coding Guidelines

Diagnosis codes other than those listed above will require review for medical necessity and prior authorization.

Documentation Requirements

The ordering physician is responsible for certifying the medical necessity of the procedure. The physician must have documentation in the medical record to support the referral.

Documentation in the progress notes must reflect medical necessity for the MRI.

Medical records can be used in any post-payment review and must include the information necessary to substantiate the need for the procedure.

Resource

Medicare Medical Policy #N001 effective 5/15/02.
Oklahoma New Mexico LCD #AC-03-010 effective 2/15/2005

Approved: _____ Date: _____