

Carnegie Hill Radiology

170 East 77th Street
New York, NY 10075

Phone [REDACTED]

Fax [REDACTED]

Steven D. Wolff, M.D., Ph.D., FACR
Director

MRI OF THE LUMBAR SPINE WITHOUT CONTRAST

PATIENT: Epstein, Jeffrey

DATE: 01/18/2018

AGE: 64 SEX: M

REFERRING: Bernard Kruger, MD

HISTORY:

Back pain radiating to both legs.

TECHNIQUE:

MRI of the lumbar spine was performed without intravenous contrast.

COMPARISON:

Lumbar spine MRI of 9/22/2011.

FINDINGS:

The T12 vertebral body demonstrates minimal anterior wedging that has not progressed appreciably since 9/22/2011. Vertebral body height is otherwise preserved.

There is grade 1 anterolisthesis of L4 relative to L5, which may have progressed minimally since 9/22/2011. Vertebral alignment is otherwise normal, and unchanged.

Apart from mild, chronic-appearing discogenic endplate changes, marrow signal is normal.

The conus terminates at the L1 level, and demonstrates no apparent signal abnormality.

There are prominent, tortuous vascular flow voids surrounding the conus, and extending inferiorly among the nerve roots of the cauda equina to the L4-L5 level, where there is very severe spinal canal stenosis (see below). This finding was not present in the prior study, and may simply reflect venous engorgement related to the spinal stenosis. However, the presence of prominent, tortuous vessels surrounding the conus raises the possibility of a spinal dural arteriovenous fistula.

The bony spinal canal is developmentally narrow, secondary to short pedicles.

At T11-T12, there is an anterior disc protrusion with associated endplate osteophytes, grossly unchanged in appearance. There is bilateral facet arthropathy and ligamentum flavum thickening. There are 5 mm perineural cysts in both neural foramina, unchanged in size, with no additional neural foraminal narrowing. There is no significant spinal canal stenosis.

(continued)

At T12-L1, there is a small anterior disc protrusion. There is no significant posterior disc abnormality. There is bilateral facet arthropathy and ligamentum flavum thickening. There is no significant spinal canal or neural foraminal stenosis.

At L1-L2, there is a small anterior disc protrusion. There is no significant posterior disc abnormality. There is bilateral facet arthropathy and ligamentum flavum thickening. There is no significant spinal canal or neural foraminal stenosis.

At L2-L3, there is a new small concentric disc bulge, with a new small central and right paracentral annular fissure that could be associated with axial or radicular pain. There is new mild spinal canal stenosis, and bulging disc material may impinge upon the descending L3 nerve roots in the subarticular zones bilaterally. There is mild to moderate bilateral neural foraminal stenosis.

At L3-L4, there is a small concentric disc bulge. There is advanced bilateral facet arthropathy and ligamentum flavum thickening. There is mild spinal canal stenosis, and bulging disc material may impinge upon the descending L4 nerve roots in the subarticular zones bilaterally. There is mild to moderate bilateral neural foraminal stenosis, which was not present in the prior study.

At L4-L5, there is disc uncovering related to spondylolisthesis, as well as a concentric disc bulge that has increased in size, advanced bilateral facet arthropathy, and ligamentum thickening. There is a large anterior annular fissure, extending from the midline to the left of midline, and a much smaller posterior annular fissure located near the midline. There is very severe spinal canal stenosis that has worsened since the prior study, with marked crowing of the nerve roots of the cauda equina, and compression of the descending L5 nerve roots in the subarticular zones bilaterally. Neural foraminal narrowing has worsened on the right, where it is now moderate, but appears unchanged on the left, where it is moderate to severe.

At L5-S1, there is a new small concentric disc bulge, along with bilateral facet arthropathy and ligamentum flavum thickening that have not worsened appreciably since the prior study. There is new mild narrowing of both neural foramina. The descending right S1 nerve roots appear to be compressed between disc material and the thickened ligamentum flavum, as was the case in the prior study.

The visualized paraspinal tissues are unremarkable.

IMPRESSION:

1. Very severe spinal canal stenosis at the L4-L5 level, caused by the combination of a developmentally narrow bony spinal canal, mild spondylolisthesis, and degenerative changes affecting the intervertebral disc, facet joints, and ligamentum flavum. The degree of spinal stenosis has worsened since 9/22/2011, as has compression of the L5 nerve roots in the subarticular zones bilaterally. Moderate to severe narrowing of the left neural foramen appears unchanged.
2. Prominent, tortuous vascular flow voids surrounding the cauda equina, and extending inferiorly to the level of very severe spinal canal stenosis. These were not

visible in the prior study. They may simply reflect venous engorgement related to the spinal stenosis, however, they raise the possibility of a spinal dural arteriovenous fistula. If clinically indicated, thoracic spine MRI and MRA may be considered for further evaluation. Urgent clinical referral may be indicated if there are rapidly progressive symptoms.

3. Additional, less severe multilevel degenerative changes, as detailed above, including possible subarticular zone impingement upon the L3 and L4 nerve roots bilaterally, and the S1 nerve roots on the right.

These findings and recommendations were discussed with Dr. Kruger.



William Copen, M.D.
Neuroradiologist