

## MR Brain WWO Contrast

TILARO, BRIAN - 000102510292

\* Final Report \*

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 Result title: MR Brain WWO Contrast  
 Performed by: HIJAZ, TAREK on 04 June 2007 10:21  
 Verified by: HIJAZ, TAREK on 04 June 2007 11:20  
 Encounter info: 000092077114, NMH Outpatient Recurring, 5/7/2007 -

## \* Final Report \*

**Reason For Exam**  
 MULTIPLE SCLEROSIS

**Report**

COMPARISON: MRI of the cervical spine dated June 4, 2007.

CLINICAL HISTORY: 44-year-old male with a reported history of multiple sclerosis.

TECHNIQUE: Axial and sagittal FLAIR, and axial T2, proton density, T1 with fat saturation pre and postcontrast, and 3-D MP-RAGE pre and postcontrast images of the brain were acquired.

FINDINGS: Multiple T2/FLAIR hyperintense lesions are identified throughout the supratentorial white matter. These are of varying sizes. The largest of these lesions is in the right corona radiata, and it measures approximately 1.7 cm AP x 1.9 cm transverse. The majority of the lesions are periventricular in location, although there are a few subcortical lesions as well. The larger periventricular lesions have a somewhat ovoid or elliptical shape, and they are oriented in a radial fashion relative to the lateral ventricles. Several lesions are also seen at the callosal septal interface. Several of the lesions demonstrate associated T1 hypointensity. This appearance is most conspicuous in the largest lesions in the bilateral corona radiata regions. The largest of the lesions in the bilateral corona radiata regions also demonstrate thin peripheral areas of intrinsic T1 shortening.

Image 120 of series 9 (axial 3-D MP-RAGE postcontrast) demonstrates an approximately 2 mm focus of enhancement along the left posterolateral aspect of one of the periventricular lesions in the white matter adjacent to the body of the left lateral ventricle. Image 115 of the same series also demonstrates an area of ring-like enhancement measuring approximately 6 mm in diameter in the periventricular white matter adjacent to the superolateral aspect of the body of the right lateral ventricle. This area of enhancement is felt to be a consequence of two small adjacent enhancing vascular structures rather than a true enhancing lesion.

Image 77 of series 9 demonstrates a poorly defined approximately 3 mm area of enhancement within the

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left cerebral peduncle. This is surrounded by a geographic area of decreased T1 signal. No definite corresponding signal abnormality is seen in this location on any of the other sequences. Image 73 of series 9 (axial MP-RAI/E postcontrast) reveals an approximately 4 mm curvilinear region of enhancement associated with a small area of T2/FLAIR hyperintensity in the medial right occipital lobe adjacent to the right side of the tentorial incisura.

Image 55 of series 9 (3 D MP-RAGE postcontrast) demonstrates a questionable 2 mm T1 hypointense lesion in the left middle cerebellar peduncle. No definite lesion is seen in this location on any of the other sequences. No definite additional infratentorial lesions are seen.

Several thin curvilinear enhancing structures are seen converging within the right cerebellar hemisphere to form a larger linear enhancing structure which ultimately connects to the junction between the right transverse and sigmoid sinuses. This enhancing structure is consistent with a developmental venous anomaly.

There is no mass effect or midline shift. No extraaxial fluid collections are identified. There is no evidence of hydrocephalus. The basal cisterns are patent. There is mild generalized prominence of the cerebral sulci, slightly greater than expected for the patient's age. The major intracranial vascular flow voids demonstrate no definite abnormalities.

The orbital contents are grossly unremarkable. Minimal mucosal thickening is identified in both frontal sinuses. Mild to moderate circumferential mucosal thickening is seen in a few bilateral anterior ethmoid air cells. The remainder of the paranasal sinuses, as well as the mastoid air cells and middle ear cavities, are clear.

## IMPRESSION

1. MULTIPLE T2/FLAIR HYPERINTENSE LESIONS THROUGHOUT THE SUPRATENTORIAL WHITE MATTER. THE MAJORITY OF THE LESIONS ARE PERIVENTRICULAR IN LOCATION, AND THE LARGEST LESIONS ARE SOMEWHAT OVAL IN SHAPE WITH THEIR LONG AXES ORIENTED IN A RADIAL FASHION RELATIVE TO THE BODIES OF THE LATERAL VENTRICLES. SEVERAL OF THE LESIONS, PARTICULARLY THE LARGER LESIONS, DEMONSTRATE ASSOCIATED T1 HYPOTENSITY. THERE IS A SMALL LESION IN THE MEDIAL-RIGHT OCCIPITAL LOBE WITH AN ASSOCIATED CURVILINEAR AREA OF ENHANCEMENT. THERE IS ALSO A SMALL AREA OF ENHANCEMENT ASSOCIATED WITH A LESION IN THE LEFT PERIVENTRICULAR WHITE MATTER. THESE AREAS OF ENHANCEMENT SUGGEST ACTIVE DEMYELINATION. OVERALL, THE APPEARANCE IS

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CONSISTENT WITH DEMYELINATING PLAQUES IN THE SETTING OF MULTIPLE SCLEROSIS.

2. SOMEWHAT RINGLIKE AREA OF ENHANCEMENT IS ALSO SEEN IN THE PERIVENTRICULAR WHITE MATTER ADJACENT TO THE BODY OF THE RIGHT LATERAL VENTRICLE; HOWEVER, THIS APPEARANCE MAY BE ARTIFACTUAL AND RELATED TO SMALL ENHANCING VASCULAR STRUCTURES IN CLOSE PROXIMITY TO ONE ANOTHER. ADDITIONALLY, THERE IS A POORLY DEFINED SMALL AREA OF ENHANCEMENT IN THE LEFT CEREBRAL PEDUNCLE. THE LACK OF ANY ASSOCIATED SIGNAL ABNORMALITY IN THIS LOCATION ON ANY OF THE OTHER SEQUENCES SUGGESTS THAT THIS ENHANCEMENT MAY BE A CONSEQUENCE OF A SMALL ENHANCING VASCULAR STRUCTURE RATHER THAN AN AREA OF ACTIVE DEMYELINATION.

2 MM T1 HYPOINTENSE LESION IDENTIFIED IN THE LEFT MIDDLE CEREBELLAR PEDUNCLE ON THE 3-D MP-RAGE PC STCONTRAST IMAGES. THIS LESION IS NOT CLEARLY SEEN ON ANY OF THE OTHER SEQUENCES; HOWEVER, THE DIFFERENCE MAY BE A CONSEQUENCE OF THE SMALLER SLICE THICKNESS ON THE 3-D MP-RAGE IMAGES. IT LIKELY REPRESENTS A DEMYELINATING PLAQUE.

4. RIGHT CEREBELLAR HEMISPHERE DEVELOPMENTAL VENOUS ANOMALY.

PLEASE REFER TO THE BODY OF THE REPORT FOR FURTHER DETAIL.

Signature Line

\*\*\*Final Report\*\*\*

Attending Radiologist HIJAZ, TAREK  
Date Signed Off: 06/04/2007 11:20  
Transc. by: CC 06/04/2007 11:09  
Dictated by: HIJAZ, TAREK 06/04/2007 10:21

Completed Action List

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TILARO, BRIAN - 000102510292

\* Final Report \*

- \* Order by BURT, RICHARD K. on 03 June 2007 8:22
- \* Perform by Titus, Ramses on 04 June 2007 9:41
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MR Spine Cervical WWO Contrast

TILARO, BRIAN - 000102510292

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\* Final Report \*

Reason For Exam  
 MULTIPLE SCLEROSIS

## Report

COMPARISON: Brain MRI dated June 4, 2007.

CLINICAL HISTORY: 44-year-old male with multiple sclerosis.

TECHNIQUE: Sagittal STIR, T2, and T1 pre- and postcontrast as well as axial T2 MEDIC and T1 postcontrast images of the cervical spine were acquired.

FINDINGS: Image 8 of series 4 (sagittal STIR) and image 32 of series 5 (axial T2 MEDIC) demonstrate an approximately 2 mm AP x 3 mm transverse x 5 mm craniocaudal hyperintense lesion in the left side of the spinal cord at the level of the superior endplate of C4. No definite additional lesions are seen within the visible portions of the spinal cord. The aforementioned lesion demonstrates no definite associated enhancement.

The cervical spine is straightened. Vertebral alignment is anatomic. The vertebral body heights are maintained. Small anterior osteophytes are noted at the C5-C6 and C6-C7 levels. The intervertebral disc heights and signal are relatively preserved. The marrow signal demonstrates no definite abnormalities.

No spinal canal or neural foraminal stenoses are identified from C2-C3 to C4-C5. At C5-C6, there is a mild broad-based posterior disc-osteophyte complex which results in mild spinal canal stenosis. Mild bilateral neural foraminal stenoses are also seen at this level as a consequence of uncinete and facet degenerative changes.

At C6-C7, there is a minimal broad-based posterior disc-osteophyte complex. No spinal canal or right neural foraminal stenoses are seen. There is mild stenosis of the left neural foramen resulting primarily from uncinete hypertrophy. At C7-T1, no significant spinal canal or neural foraminal stenoses are seen.

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At T1-T2, there is a small right paracentral disc protrusion which results in mild deformity of the right ventral aspect of the thecal sac but no significant spinal canal stenosis.

IMPRESSION

1. SMALL T2 HYPERTENSE LESION IN THE LEFT SIDE OF THE SPINAL CORD AT THE LEVEL OF THE SUPERIOR ENDPLATE OF C4. NO ASSOCIATED ENHANCEMENT IS SEEN. NO ADDITIONAL SPINAL CORD LESIONS ARE IDENTIFIED. GIVEN THE APPEARANCE OF THE LESIONS IN THE WHITE MATTER SEEN ON THE ACCOMPANYING BRAIN MRI, THIS LESION IS CONSISTENT WITH A DEMYELINATING PLAQUE IN THE SETTING OF MULTIPLE SCLEROSIS.

2. MILD DEGENERATIVE CHANGES AT A FEW LEVELS IN THE CERVICAL SPINE AS NOTED ABOVE.

Signature Line

\*\*\*Final Report\*\*\*

Attending Radiologist HIJAZ, TAREK  
Date Signed Off: 06/04/2007 11:10  
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