

## EMG & NCS

Posted by mitsuyo\_sprague - 29 Nov 2005 15:29

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Hi DocSarah,

I am interredted to know the accuracy and/or usefulness of EMG and NCS for the diagnosis of Arachnoiditis.

As I mentioned before, I had a mylogram study with CT scan done over a year ago for my lower back. The radiologist reported that there was clumping of several nerve roots within the thecal sac at approximately the L4 vertebral body level, an arachnoiditis involving the lower caudal equinal roots. I had a fusion of L5-S1 with metal screws in 1991, which usually limit what can be seen in MRI and een CT.

Then I had EMG and NCS done this July, which revealed chronic left L5 and bilateral S1 radiculopathies, which probably was reflective of prior injury, though there was some evidence of an active process. The doctor who did the study wanted to insert the needle into my lower back area but ended up not doing so due to my pain. Also, I couldn't move my legs as I was told at other locations of testing. He said these factors might limit evaluation. I don't quite understand nor was I given any more explanation as to:

(1) Why these chronic radiculopathies didn't show up in MRI or particularly in mylogram with CT. Is it because of the screws? Or maybe radiculopathy cannot be seen in any scans???

(2) Why EMG and NCS didn't reveal arachnoiditis? Is it because I didn't quite complete the tests -- no needle in lower back area, not enough movement of my legs, etc?

(3) I think my rheumatologist was looking for but didn't see some evidence of mylopathy in the study report to confirm arachnoiditis. Is arachnoiditis considered mylopathy?

Sorry for a long post. Thinking about these questions makes me wonder and doubt whether I have A or not, stressing me out emotionally. I am reminded of what my neurosurgeon said about the mylogram report: it is just one man's interpretation. Well, my pain might not be as severe as most others with A/AA. But I do have all kinds of symptoms as they do. Even though there is no cure for, I would rather know that I have A/AA and be treated/cared for than being considered as hypochondriac.

Thanks for listening. Have a wonderful week.

Mitsuyo

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## Re:EMG & NCS

Posted by DocSarah - 30 Nov 2005 11:29

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Hi Mitsuyo,

to answer your queries:

1. Nerve root clumping does not always show up, especially if either the scan resolution was too poor, or more commonly, the radiologist wasn't looking for it, or sometimes in the early stages of AA it is difficult to image. Radiculopathy simply means abnormality of nerve root(s) and can arise from a number of different causes, usually a 'slipped disc' impinging on the root: which shows up as the prolapsed disc rather than demonstrating the actual damage to the nerve root. MRI shows anatomical abnormalities not physiological ones (nerve pain can come on with as little as about 10% compromise of function, which may not be visible on anatomic scans), and although it shows a lot, is often not specific. Ditto for CT scan. Also, if you have hardware (screws etc.) in your spine, this will cause 'artefacts' in the imaging, i.e. distortions which make interpreting the scans very difficult if not impossible. Hence the need for a CT myelogram. This should demonstrate significant filling defects in nerve root sleeves or the subarachnoid space (abnormal CSF flow) but again, it doesn't directly show nerve damage as such. We also have to bear in mind that MRI scans are done with the patient lying flat, which doesn't show what happens when you sit up or stand (or walk). The postural differences (which tend to be when symptoms occur) are therefore not taken into account.

2. EMG/NCS are physiological tests of nerve function. However, they concentrate primarily on motor (movement) function and pain is a sensory function. So they are less likely to be abnormal in AA unless there is some weakness as well as the pain/abnormal sensations. I don't recommend these tests as helpful in diagnosing AA.

I tend to make a diagnosis based on the history: i.e. have you had risk factors for AA (surgery, myelogram etc.) plus the symptom complex (although that can be quite non-specific and mimic other chronic pain syndromes such as fibromyalgia).

I hope this clarifies things for you.

Regards,

DocSarah

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## Re:EMG & NCS

Posted by mitsuyo - 01 Dec 2005 22:32

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Dear DocSarah,

Thank you so so much for answering my questions in great details!!! What you said really helped me feel "relieved" and "redeemed."

I have had the risk factors for AA: fusion L5-S1, epidural anesthesia for labor 3 times, one of which ended up with C-section with more dose of anesthetic drug (and morphine for pain afterward) in the catheter. Myelogram with CT actually helped reveal clumping of nerve roots. Also, fusion of C5-C6 due to spondylosis and central stenosis at C4-C5.

I have had the symptom complex though I must say my pain level seems to be much lower than other people with AA. Yes, I was told I had Fibromyalgia -- for a long time. Now I know I have it as part of AA.

My best friend who suffers from chronic Lyme thinks I might have Lyme and should be tested for it. Well, now I might have Lupus. I was tested for MS before.

When my rheumatologist read the symptoms of AA in your short article I gave her, she exclaimed, "Many of my patients have these symptoms!" She then asked me how AA could be diagnosed since these symptoms were so general. Even though I told her that it should be diagnosed based on one's medical history, her comment on the discrepancies between my myelogram result and EMG/NCS result made me so insecure and even doubtful about my diagnosis. So, I am very grateful for your reply!!! And I am excited to see that my rheumatologist is willing to learn more about AA. That is a great thing.

Best regards,

Mitsuyo

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## Re:EMG & NCS

Posted by DocSarah - 09 Dec 2005 14:38

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Dear Mitsuyo,

your plight is much the same, sadly, as others with similar symptoms. I know first hand how hard it is not to be believed. I always say it is vital for doctors to treat the patient not the test results!

All the best,

DocSarah

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## Re:EMG & NCS

Posted by mitsuyo - 09 Dec 2005 21:16

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Hi DocSarah,

I am glad you are back to the Forum! I think rheumatologists are in general more open-minded and sympathetic than other specialists, at least in my experience. I gave my doctor more articles on AA!!! One of them is "Diagnostic Criteria for Adhesive Arachnoiditis" by you. She thanked me for the articles, and I just hope she will have some time to read them!

Best regards,

Mitsuyo

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