

Case Study for Use with Neuromyelitis Optica

While this does not imply that all patients will respond in the same manner I do believe the extraordinary results do warrant further investigation. I will define both the subjective observations by the patient, her parents and our staff as well as the diagnostic testing that was performed. Requests are being made for the patient's records from her previous doctors as well as from Dr. Gabriel Pardo, MD at Oklahoma Medical Research Foundation. Dr. Pardo and his staff did an evaluation of patient on August 29, 2011 after 3 treatments.

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Duration of Treatment:

Treatment began on August 24, 2011 and last treatment in clinic was on August 30, 2011. Patient had a total of 5 one hour treatments.

Definition of disease:

Neuromyelitis optica (NMO), also called Devic's disease, is a central nervous system disorder involving inflammation of the eye nerves (optic neuritis) and inflammation of the spinal cord (myelitis). It occurs when your body's immune system reacts against itself as well as against unwanted conditions such as infections or cancer. It may cause blindness in one or both eyes, weakness or paralysis in the legs or arms, painful spasms, loss of sensation and bladder or bowel dysfunction from spinal cord damage. Attacks may be reversible, but can be severe enough to cause permanent visual loss and problems with walking.⁽¹⁾

Patient History

Patient is a 33 year old female. Patient was diagnosed with NMO July of 1989. At the time of onset patient was 11 years of age. Initial event of optic neuritis caused permanent blindness in patient. July 15, 2001. The transverse myelitis event occurred on July 15, 2001 effected spinal cord at the T3 level and below causing loss of bladder control, bowel control and paralysis in both legs. Patient is 22 years since onset of NMO and 10 years since paralysis presented.

Pain Levels:

Start of study (8/24/2011):

When patient started study she stated her pain levels to be at continuous 6-8. With aching, gnawing, tender, burning, exhausting, tiring, penetrating, nagging, numb, miserable and unbearable as the descriptives. She was unable to sleep due to pain levels.

End of study (8/30/2011):

At end of study patient stated her pain levels had decreased to 1 and only occasionally. With aching and tenderness as the descriptives.

1. <http://www.mayoclinic.org/neuromyelitis-optica/>

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Medications (pain related):

Start of study (8/24/2011):

Lyrica® 75mg 3x daily very little relief

Percocet® 5mg 3 x daily very little relief

Cymbalta® 60 mg 1 x daily moderate pain relief

End of study (8/30/2011):

Lyrica® 75mg 1x daily very little relief

Percocet® 5mg 0x daily (no percoce®t was needed after the start of study)

Cymbalta® 60mg 1x daily no effect pain level decreased

At Present (12/21/2011)

Lyrica® 75mg 0x daily very little relief

Percocet® 5mg 0x daily (no percoce®t was needed after the start of study)

Cymbalta® 60mg 1x daily no effect pain level decreased

Incontinence

Patient had urodynamic testing done August 1, 2011 with the following results as reported by patient:

85 cc complete void of bladder

115 cc bladder spasm

Start of study (8/24/2011):

Catheter maximum upon waking amount from patient 50cc per drainage time

End of Study (8/30/2011):

Catheter maximum upon waking amount 950cc per drainage

At Present (12/21/2011)

Catheter maximum upon waking amount 1000cc per drainage with/out voiding

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Bowel:

Start of study (8/24/2011):

Subject had use MiraLAX® every day to help with extreme constipation.

End of Study (8/30/2011):

Subject was able to have regular bowel movements without the aid of a softener

At Present (12/21/2011)

Subject has reduced MiraLax to twice per week. This could also be due to the reduction of pain medication.

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Reflex Actions:

Start of study (8/24/2011):

No reflex registered bilaterally

End of Study (8/30/2011):

Strong reflex registered bilaterally

Arms and Hands

Start of study (8/24/2011):

Patient had limited to control of her arms and hands unable to make a fist. Unable to grasp a glass or a small object. Unable to easily find mouth with hand and used head to go to hand. Patient had lack of sensation and in places numb. No control over ring finger and pinkie finger bilaterally.

Patient able to point to body parts and dad has regained spatial recognition.

End of Study (8/30/2011):

Patient could grasp and hold objects in one hand. Able to make and hold a fist unassisted. Able to hold an ink pen. Able to easily find mouth and place index finger on lips. Patient gained sensation and able to differentiate between textures. Able to grasp and hold with all four fingers. Able to turn wheelchair wheel on her own.

Patient noticed able to pull up without much assistance increase in over all strength of arm and shoulder area.

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Patient can do shoulder circles without pain and has noticed a large increase in mobility and strength.

At Present 12/21/2011

Decreased in left hand and eliminated in right hand the contractor that occurred in the ring and pinkie.

More control of doing daily task, holding toothbrush, washing face, holding shower sprayer feeding self and brushing hair.

Pain reduction in shoulder that had surgery.

Able to do physical therapy.

Abdomen

Start of Study (8/24/2011):

Distention of abdomen was pronounced.

End of Study (8/30/2011):

Noticeable decrease of size of abdomen.

At Present (12/21/2011):

No abdomen in soft.

Sleep Patterns:

Start of Study (8/24/2011):

Patient rarely had 4 hours of sleep in one night. Very restless sleep. Took up to two hours to fall asleep.

End of Study (8/30/2011):

Patient is sleeping 8.5 hours per night since start of study. Wakes rested and falls asleep with ease. Patient stated she has no pain to keep her awake or wake her up.

At Present (12/21/2011)

No change, still sleeping and waking rested.

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Appetite and thirst sensation:

Start of Study (8/24/2011):

Patient had no thirst had to remember to drink fluids and appetite was low.

End of Study (8/30/2011):

Patient has thirst and increased appetite.

At Present (12/21/2011):

Patient still has thirst and appetite.

Lung Function and Voice:

Start of Study (8/24/2011):

Voice weak and breathing abnormal. Patient took time to form words.

End of Study (8/30/2011):

Voice noticeably stronger and breathing eased. Patient did not have delay during conversation.

At Present (12/21/2011):

Voice still stronger and breathing still eased. Spirometer reading 1000 points increase since start.

Biothesiometer:

See chart for breakdown. Summary patient regain feeling on abdomen and upper left leg.

Monofilament:

See attached for detailed breakdown. Summary patient regained sensation from Start of study (8/24/2011): of T3 to End of Study (8/30/2011): L5 on spine. Also, regained feeling on all fingers and hand.

Movement of toes

Movement of feet

Kick the soccer ball could see muscles move

Physical therapy able to increase weight and add on exercises than ever before. Shorter downtime. Before get so fatigued could not make appointments. Able to do more exercises since the beginning of September.

Feeling further down back and front.

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Can tell pressure on abdomen.

Autonomic nervous system back lower right leg would sweat that is now returned. When needing to urinate.

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Retoxim- this time the effects of chemo took 3 weeks.

Able to hold on during transfer and help.

Increased temperature in legs and color has normalized.

Toe nails growing faster

Toe nail fungus started in 2010 and it growing out.

Feet responding to being tickled

Sitting up straighter

No Dizzy spells on transfer

Sitting up straighter

Can ride without ball between legs, legs now have the natural spacing between them.

Better balance in the sitting position in all chairs.

Can now tell when not straight

Can tell when more weight on one hip than the other.

Spine not curving and head would lean to right side