Managing the Symptoms of Multiple Sclerosis

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What is Multiple Sclerosis

- An autoimmune disease that affects the central nervous system (CNS)
- The immune system mistakenly attacks the body’s myelin and cause the nerves to be damaged causing scarring
- The scarring begins to slow and interrupt the transmission of nerve impulses, resulting in the symptoms of MS
MS Affects the Brain, Spinal Cord and Optic Nerves
MS Brain Lesions
Bilateral Optic Neuritis
Transverse Myelitis
Common Symptoms of MS

- Tingling or numbness in one part of the body
- Problems with balance and/or coordination
- Muscle weakness in one part of the body
- Fatigue
- Spasticity
- Change in vision
- Fatigue
- Slurred speech or stuttering
- Bladder or bowel problems
- Cognitive changes
- Depression or other emotional changes
## Temporary and Permanent Symptoms

### Temporary Symptoms
- Due to exacerbations or flare-ups
- May be due to new symptoms or the aggravation of old ones
- Associated with inflammation and demyelination in the CNS
- Treated with corticosteroids by mouth or by IV

### Permanent Symptoms
- Inflammation that has resulted in permanent scarring or damage to the nerve cell
- Occurs when the symptoms tend to remain.
- Treatment options are based on each individual patient symptoms
Deciding When and If to Treat

- Numbness, tingling and very mild weakness is frightening and disconcerting to the child, but generally resolves on its own without medication.
- Medication is only prescribed for those acute attacks that are significant enough to interfere with the child’s function at home or at school.
Example 1

- 17 year old Shawn went outside to shovel the snow. When he came back in he notices right hand was numb. Should the Neurologist be called?
- The next day the numbness is still there. He attempts to drink a cup of coffee and the drops the hot cup onto the floor! Should his neurologist be called now?
- What if after a few hours the numbness is gone and it periodically comes and goes?
Example 2

- Kelly wakes up and notices that her right eye is blurry. It last for 10 minutes and then her vision returns to normal. Should she call her Neurologist?

- Kelly wakes up to extreme left eye pain and double vision; she can not see out of that eye and the light at school hurts her eye; Should she call her Neurologist now?
Corticosteroids

- Man-made hormone given to reduce inflammation
- Can be given by mouth (Prednisone) or by IV (Solumedrol)
- 3-5 day course of high dosage
- Given to improve symptoms and shorten recovery time
- Corticosteroids do not change the long-term course of MS or have any other long-term benefits
Other Acute Treatment Options

- Intravenous Immune Globulin (IVIG)
- Plasma Exchange (PLEX)
Modifying the Disease Course

- Currently there are 4 medications that modify the immune system in order to reduce immune activity in the treatment of Relapsing-Remitting MS

  - Avonex
  - Betaseron
  - Copaxone
  - Rebif
MS or not MS?

- MS can cause symptoms in many parts of the body, however, **it is not the cause of everything that occurs**!
- You can get the same viral illnesses and assorted problems that all people your age get.
- Fevers or infections may temporarily worsen MS symptoms, but will improve as the fever is under control.
Examples of Symptoms that Are Not MS

- Upper respiratory infections
- Infections
- Nose bleeds
- Headaches
- Stomach viruses
- Fever

- Rash over entire body
- Acne
- Flu-like symptoms that last longer than 48 hours
Example of Symptoms that May Be Due to Exacerbation

- Bladder or urinary tract infection
- Constipation
- Loss of control of bladder or bowel
- In addition to other neurologic symptoms discussed earlier!
MS Fatigue

- Most common complaint
- Caused by a variety of factors
  - Sleep disturbance
  - Medications
  - Lack of energy
- Identify the source
  - Talk with your healthcare provider (i.e. for sleep aids, medications for fatigue, or PT exercises)
MS and Heat Intolerance

- Overheating can increase fatigue, weakness and visual disturbance
  - Drink plenty of fluids - water is the choice!
  - Use fans, air-conditioning or spray bottles
  - Exercise in a cool environment

- Wear commercial cooling garments - vests, headbands, neckbands
  - Pre-cool before activities
  - Do a cool bath or shower following activity or exposure to a hot environment

Beat the Heat
Summary of Symptoms to Report

- Changes in Vision
- Eye Pain
- Incontinence
- Muscle Weakness
- Facial Drooling
- Difficulty Swallowing
- Difficulty Breathing
- Fatigue
- Depression
- Cognitive Changes

- Suicide
- Frequent UTIs
- Bladder or Bowel Dysfunction
- Spasticity
- Slurred speech or stuttering
- Balance and/or coordination
- Tingling or Numbness
When to go to your local ER
Immediately!

- Difficulty Breathing
- Difficulty Swallowing
- Thoughts of Suicide
- Sudden Onset of Cognitive Change
- New Onset Seizures

*These symptoms require immediate attention, the Neurology Team can be notified after the patient is stable!
Choosing When to See Your Neurology Team

- When symptoms are noticed, make a mental/written record of the time!
- If the symptoms last more than 24 hours or if the patient is getting worse, notify the Nurse Practitioner for advice and recommendations!
- If the symptoms are better within 24 hours or less, record the date and time and notify the team at your next appointment!
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