

Neurology Resident Assignment

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This case report involves a young man that was diagnosed with Narcolepsy in 1994. His current care and treatment are through MCV Neurology Department. This case report is written as he presented in 1994.

Case Report: 22 year old white male with following complaint:

- Excessive sleepiness, started in mid teens
- Often fell asleep during class
- Had several auto accidents as a result of falling asleep at the wheel
- On rare occasions of emotional stress, would pass out
- Sleep related hallucinations at beginning of sleep
- Rare incidents of inability to move upon waking/ felt exhausted
- Occasionally fell asleep during eating or talking
- Short naps were often helpful

Other Information on Patient

- Did not have allergies to medications
- Was not taking prescription drugs
- Did not have significant past medical history
- Paternal grandfather had Narcolepsy
- Patient smoked half pack of cigarettes a day
- Did not drink alcohol or use illegal drugs
- Physical and neurological exams were normal

Differential Diagnosis

- Narcolepsy
- Sleep Apnea
- Seizures (Absence, Complex Partial, etc.)
- Poor sleep hygiene
- Syncope/ Pre-syncope
- Depression
- And Others: Brainstem Gliomas, Bilateral Diencephalic, Lesions, Drug Abuse

Final Diagnosis: Narcolepsy

- Basic labs: CBC and basic metabolic panel/ normal
- EEG and MRI of brain were normal
- Overnight polysomnogram was normal
 - No significant respiratory events demonstrated
- Multiple Sleep Latency Test(MSLT) findings consistent with Narcolepsy
 - Mean sleep latency of 3.38 minutes
 - Three sleep onset REM episodes
- MSLT shows more than two sleep onset REM periods and sleep latency of less than 5 minutes suggestive of Narcolepsy

Clinical Question

- This patient was diagnosed before Modafinil (Provigil) was available in the U.s. Is it possible to switch his medication of Methylphenidate and Dextroamphetamine to Modafinil?

Therapeutic Options

- Non-pharmacologic Treatments:
 - regular sleep schedule (approx. 8hrs.)
 - scheduled naps
 - avoid alcohol and illegal drugs
 - proper nutrition and exercise
 - restrict driving when drowsy
- Pharmacologic Treatments:
 - excessive somnolence
 - Pemoline, Methylphenidate, Dextraphine Sulphate, Methamphetamine, Amphetamine
 - Modafinil
 - cataplexy
 - TCA's (ie. Clomipramine)
 - SSRI's (ie. Fluoxetine)
 - Sodium Oxybate (Xyrem)

Outcomes

- Patients that have Narcolepsy and remain undiagnosed will have multiple problems
 - hypersomnolence will cause impaired work or school performance
 - difficulty forming social relationships secondary to drowsiness and embarrassing cataplectic attacks
 - increased risk for motor vehicle accidents
 - 24% quit working
 - 18% terminated from jobs

Board-type Questions

- At what age are the majority of narcoleptic patients diagnosed?
 - a < 2 years old
 - b between 2 and 5 years old
 - c between 5 and 10 years old
 - d early 20's to early 30's
 - e >50 years old
- Which medication(s) is(are) used to treat the symptom of Cataplexy?
 - a Clomipramine
 - b Sodium Oxybate
 - c Fluoxetine
 - d None of the above
 - e All of the above

- Which symptom(s) is (are) associated with Narcolepsy?
 - a Sleep paralysis
 - b cataplexy
 - c excessive daytime sleepiness
 - d hypnagogic hallucinations
 - e all of the above

Other Comments

- After researching Narcolepsy, I was surprised to discover that the incidence and prevalence is equal to Multiple Sclerosis. I believe that many patients with Narcolepsy may be undiagnosed.
- Patients that were diagnosed before Modafinil was available could possibly be switch from older medications that carry greater side effects and possible addiction. Both articles that I reviewed suggest that switching from amphetamines to Modafinil is beneficial and safe.