Fatigue in Sarcoidosis

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Fatigue in Sarcoidosis

• Up to 80% of patients with sarcoidosis report fatigue
• Fatigued patients report worse Quality of Life
• Many sarcoidosis patients with good control of disease still have persistent, disabling fatigue
What is Fatigue?

• Temporary loss of strength and energy
• Tiredness
• Exhaustion
• Lethargy
• Weariness
Fatigue: transient or self-limiting

- Viral or other infection
- Overwork
- Stress
- Sleep deprivation
- Jet-leg

Listen to the signals of your body
Take a nap on time...

Vincent van Gogh
What Causes Fatigue?

Diabetes
Impaired Mobility: Heart or Lung Disease, Arthritis

Sleep Disorders
Poor Nutrition

Recurrent Infections
Depression

Assessment of Fatigue

Disease Control

NO
- Maximize Therapy

YES
- Evaluate for Coexisting disease
  - Check Glucose, Thyroid function
  - Treat Coexisting disease
  - Evaluate for Sleep apnea and/or Depression
  - If fatigue still present Consider Neurostimulant
Fatigue Intervention: Disease Control

- Treatment can be a double-edged sword.
- Sarcoid granulomas may worsen fatigue.
- However, treatment with corticosteroids may lead to side effects that worsen fatigue.
  - Weight gain
  - Diabetes
  - Sleep apnea
Additional Fatigue Intervention

- Lifestyle changes
  - Exercise
  - Diet
  - Weight reduction

Persistent Fatigue: Sarcoidosis Associated Fatigue
Fatigue Assessment Instrument

Pitfalls for Studying Fatigue

- Measuring fatigue is difficult
- Placebo effect is powerful
- Fatigue varies from person to person
Measuring Fatigue

- Multiple instruments to measure QOL and fatigue
- No perfect testing
- Chronic Illness
  - FACIT-F, SF-36
  - WHO-QOL
- Sarcoidosis
  - Fatigue Assessment Scale (FAS)

Neurostimulant Therapy for Sarcoid Associated Fatigue

- Case reports suggest benefit for methylphenidate (Ritalin®) for chronic sarcoidosis patients with persistent fatigue.
- Other neurostimulants, including dex-methylphenidate (Focalin®), can improve fatigue in cancer patients with “chemo” brain.
A Phase II, Randomized Placebo-controlled Trial of the Safety and Efficacy of d-MPH as a New Treatment of Fatigue and “Chemobrain” in Adult Cancer Patients

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Purpose of Study

• To evaluate the efficacy and safety of dexamethylphenidate (d-MPH, Focalin®), a CNS stimulant, for the treatment of fatigue and cognitive impairment associated with chemotherapy
A Randomized Double Blind, Placebo Controlled Trial of Dexamethasone Hydrochloride (d-MPH) for Sarcoidosis Associated Fatigue

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Double Blind, Placebo-Controlled, Cross Over Study

Week of Study

Treatment 1: d-MPH or Placebo
Treatment 2: Placebo or d-MPH (opposite of treatment 1)

FAS: Lower Score, Less Fatigue

Difference between d-MPH and placebo p<0.02
FACIT-F: Higher Score, Less Fatigue

Difference between d-MPH and placebo p<0.005

Sleep Disorders
Why do Neurostimulants Improve Fatigue?

- Sleep problems are common in patients with fatigue
- Methylphenidate is useful in treating excessive sleepiness or narcolepsy
- Armodafinil (Nuvigil®) is also useful in treating excessive daytime somnolence
  - Assessed by Mean Sleep Latency Time (MSLT)

Armodafinil for Sarcoidosis Associated Fatigue: Double Blind, Placebo Controlled, Cross Over Trial

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R-Modafinil for Sarcoidosis Associated Fatigue

Study Aims

- Determine if r-modafinil is effective in treating sarcoidosis associated fatigue
  - Study design similar to d-MPH study

- Determine if r-modafinil is more effective in treating sarcoidosis associated fatigue in patients with excessive daytime somnolence
  - Determined by Mean Sleep Latency Time (MSLT) < 8 minutes

Double Blind, Placebo-Controlled, Cross Over Study

Treatment 1: r-Modafinil or Placebo
Treatment 2: Placebo or r-Modafinil (opposite of treatment 1)
ALL PATIENTS
Change in FAS score from Baseline after 8 weeks of therapy, p<0.01

Change in FAS Score from Baseline

Eight Weeks Therapy
MSLT < 8 minutes

Eight Weeks Therapy
MSLT > 8 minutes

Red: MSLT <8 minutes; Blue MSLT>8 minutes
Summary of r-Modafinil Study

• r-Modafinil was effective in treating sarcoidosis associated fatigue

• The drug was as effective for patients without hypersomnolence (MSLT>8 minutes) as for those with hypersomnolence (MSLT<8 minutes)

Summary and Conclusions

• Fatigue is a very common problem in sarcoidosis

• Assessment needs to include
  – Appropriate disease treatment
  – Evaluation and treatment of other medical problems

• Persistent fatigue may require intervention with neurostimulants along with lifestyle changes
Assessment of Fatigue

Disease Control

NO
Maximize Therapy

YES
Evaluate for Coexisting disease

Check Glucose, Thyroid function

Treat Coexisting disease Evaluate for Sleep apnea and/or Depression

If fatigue still present Consider Neurostimulant