Fatigue

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Doc, I’m tired all the time…

- Fatigue is a sense of tiredness and lack of energy
- Differentiate from weakness or exertion difficulty
- Should be persistent for some time before aggressive pursuit
History
Time and nature of onset

– Sudden onset
  • Infectious
  • Postinfectious
  • Ischemic
  • Drugs
  • Toxins

– Gradual onset
  • Metabolic
    • Uremia
    • Heart failure
    • Liver Failure
  • Endocrine
    • Diabetes
    • Hypercalcemia
    • Hypothyroidism
  • Electrolytes
  • Anemia
  • Depression
History

• Define the fatigue
  – Tires easily with weakness
    • MS, myasthenia gravis
  – Poor sleep
    • Sleep apnea, restless legs, depression
Causes of fatigue

- Psychiatric disease
- Infectious disease
- Malignancy
- Autoimmune disease
- Neuromuscular disease
- Endocrine
- Drugs
Psychiatric Disease

• Depression
  – Substance abuse often coexists
  – Seasonal affective disorder
  – Dysthymia

• Anxiety disorders

• Generally uncommon in psychotic and personality disorders
Infectious disease

• Acute infections often associated with fatigue due to immune response
• Occult chronic infections may present as fatigue
• Often infections associated with fever, chills, night sweats, myalgias, arthralgias, or weight loss
Viruses

- HIV
- Hepatitis B and C
- Epstein-Barr virus
  - Organomegaly, + monospot
- Cytomegalovirus
  - 3-4 week process, diffuse adenopathy
  - - monospot, + CMV IgM titers
- Parvovirus B19
  - Overlap with rheumatoid arthritis symptoms
Other chronic infections

- Occult abscess
- Endocarditis
- Histoplasmosis, Blastomycosis, Coccidiomycosis
- Parasites
  - Toxoplasmosis
  - Amebiasis
  - Giardia
  - Helminths
Malignancy

• Fatigue is a sign of advanced disease
• Usually a side effect of radiotherapy or chemotherapy
• Risks for cancer should be assessed and pursued
  – Smoking history – lung CA
  – Altered bowel habits – colon CA
  – Chronic hepatitis – liver CA
Autoimmune disease

• Lupus
• Rheumatoid Arthritis
• Sarcoid
• Mixed connective tissue disease

Most of the time will be associated with other symptoms, ESR, anemia, abnormal chest x-ray or urinalysis
Neuromuscular disease

• Myasthenia gravis
  – Fatigability of muscle group with repetitive use

• Multiple sclerosis
  – Should include other features such as abnormal motor/sensory function, visual changes, etc.
Endocrine

• Hypothyroidism
• Cushing’s syndrome
• Addison’s disease
Cushing’s syndrome

• Hypercortisolism
• Hypertension
• Obesity
• Diabetes
• Hirsutism
• Acne
• Striae
Cushing’s workup

• Elevated urinary free cortisol (>90ug/day)
• Dexamethasone suppression test
  – 1 mg dexamethasone po at 11pm
  – Serum cortisol at 8am is >10 ug/dL
• ACTH level
  – Low: adrenal hyperplasia or tumor
  – High: pituitary vs ectopic ACTH
Addison’s disease

- Hypocortisolism, hypoaldosteronism
- Hypotension
- Anorexia
- Weight loss
- Nausea/vomiting
- Increased pigmentation
- Hyperkalemia
- Non anion gap metabolic acidosis
Addison’s workup

• AM cortisol is low

• ACTH level
  – Low: secondary insufficiency, check pituitary
  – High: primary, confirm with ACTH stimulation test (cortisol fails to climb above 20ug/mL after 60 minutes)
Drugs

- Cardiovascular
  - Beta blockers; especially nonselective
    - Propranolol, nadolol
- Antihistamines
  - OTC H1 blockers and Rx H2 blockers
- Psychotropic medications
- Elderly especially susceptible
- Trial and error approach
Workplace

• Stress
• Toxin exposure
• Abnormal work hours
Physical Exam

• General – note depressed affect
• HEENT
  – Look for jaundice
  – Sinus/ear infections
  – Throat for exudate, postnasal drip
• Neck – adenopathy, thyroid palpation, JVD
• Heart – murmurs, tachycardia
• Lungs - COPD
Physical Exam

- Abdomen – organomegaly
- Genitals – masses
- Rectal – guaic, masses
- Skin – rashes, discoloration
- Lymph nodes
- Neuro – memory, gait
Labs screening

- CBC with differential
- ESR
- Electrolytes ($K^+$, $Ca^{2+}$, $CO_2$, BUN, Creatinine)
- TSH
- LFT’s
- CK
- UA
Labs when indicated

- Chest Xray
- ANA
- HIV
- PPD
- Hepatitis panel
- Lyme serologies
- Blood cultures
Chronic Fatigue Syndrome

- CDC estimates 4-8 cases/100,000 adults
- 50-70% meet criteria for depression
- Implicated pathogens:
  - Brucella, coxsackie, EBV, herpes virus 6, retroviruses, lyme
Guidelines for Chronic Fatigue

• Evaluated, unexplained, persistent or relapsing fatigue with
  – New or definite onset
  – Not due to exertion
  – Not relieved by rest
  – Substantial reduction in premorbid function
    • Mental and physical
  – Sore throat
  – Tender adenopathy
  – Myalgias and arthralgias without joint swelling
  – Headaches
  – Postexertional malaise lasting more than 24 hours
Chronic Fatigue

- Prognosis generally good
- SSRI’s, low dose tricyclic antidepressants can be of benefit
- Fish oil supplements beneficial
- Not helpful: acyclovir, immunoglobulins, interferon alpha, magnesium sulfate