



“It Burns!” Assessment and Treatment of Neuropathic Pain

Introduction:

This self-directed learning exercise explores the assessment and management of neuropathic pain. Through a case presentation and related readings, the student will identify appropriate strategies for assessing and treating common sources of neuropathic pain.

Learning objectives:

After completion of this module the student should be able to:

- 1) Recognize common presentations and symptoms of neuropathic pain
- 2) Understand basic pathophysiologic mechanisms of neuropathic pain
- 3) Identify chronic medical diagnoses associated with neuropathic pain
- 4) Discuss the most effective therapies available for this type of pain

ACGME Competencies:

Practice-based learning and Improvement, Medical knowledge, Patient care,

What you need to complete the module:

- 1) Download and print the workbook
- 2) Read case presentation
- 3) Read the following:

a) Jackson KC. Pharmacotherapy for neuropathic pain. *Pain Practice* 2006;6(1):27-33.

b) American Medical Association “Pathophysiology of Nociceptive and Neuropathic Pain”.

Accessed on-line at:

http://www.ama-cmeonline.com/pain_mgmt/module01/03patho/index.htm

- 4) Answer questions in workbook
- 5) Bring completed module to the Palliative Medicine Workshop for discussion

Case Presentation:

Mr. Smith is a 39 year-old male with who presents to the outpatient clinic with 3 weeks of intermittent shooting and burning pain in his lower extremities. The symptoms occur mainly at night, are not associated with physical exertion and usually come on suddenly. The pain is usually 4/10 in severity but increases to an 8/10 when he feels “shooting pains”. He has been poorly sleeping at night as it “burns terribly” when the bedsheet lightly touches his skin.

Past medical history:

- **HIV - diagnosed 5 years ago with last CD4 count of 250 1 year ago. His counts have been stable on his current HAART regimen over the last 10 months.**
- **Depression - well-controlled on sertraline (Zoloft) 200 mg daily.**

Family history: sister with juvenile diabetes.

Social history: non-smoker, denies alcohol, occasionally smokes marijuana which he feels helps the pain. He contracted HIV through a blood transfusion as a child.

Review of systems: as above, otherwise negative.

Questions:

- 1) What could be the cause of Mr. Smith's pain? (circle all that apply)
 - a) Undertreated depression
 - b) Undiagnosed diabetes
 - c) Medication side effect
 - d) HIV neuropathy
 - e) Postherpetic neuralgia

- 2) How do you define the symptom he is experiencing at night?
 - a) Allodynia
 - b) Hyperalgesia
 - c) Hyperpathia
 - d) Nociceptive pain

- 3) Which of the following medications would you start to treat his symptoms? (circle any that may apply)
 - a) Start gabapentin at 300 mg at night
 - b) Apply Lidocaine patches 5%, 3 on each foot, at night
 - c) Start amitriptyline 10 mg at night
 - d) Start tramadol 100 mg four times a day

- 4) Which of the following statements is *true* regarding medications used to treat neuropathic pain?
 - a) Amitriptyline is a tertiary amine that has a more favorable side effect profile than secondary amines (e.g. nortriptyline)
 - b) Tramadol is a peripherally acting agent with a strong affinity for mu-opioid receptors and reuptake inhibition of norepinephrine and serotonin
 - c) The most common side effect of gabapentin is dry mouth
 - d) Most studies have focused on postherpetic neuralgia, diabetic peripheral neuropathy, and trigeminal neuralgia