EVIDENCE-BASED APPROACHES: IMC Case on Low Back Pain

A 46 year old white female presents to the IMC with a chief complaint of low back pain. The patient states she started to have low back pain 2 days ago after lifting some heavy boxes in her basement (she was throwing out some of her ex-husband's stuff). She describes the pain as 8/10, dull constant ache in "the small of my back". She states there is some mild pain in her right buttock as well, but no significant pain in her legs. She denies any weakness or numbness in her legs. She is able to ambulate, but notes significant increased low back pain with any motion. She denies any abdominal pain, dysuria, hematuria, urinary incontinence or retention, bowel incontinence or constipation, fever or chills. She has no history of cancer. She has been using ice packs on her back, applying Ben Gay with minimal relief, and pretty much "staying in bed". Acetaminophen has provided mild relief. She works as a secretary for a shipping office and has had to call off work the last two days. She denies history of injury, trauma, or previous low back pain. The patient screens positive for depression, but denies suicidal or homicidal thoughts and refuses any treatment ("I just need to get through this tough time").

Past Medical Hx: Uterine fibroids, allergic rhinitis, deviated nasal septum, migraine headaches
Past Surgical Hx: Hysterectomy (fibroids) at age 42
Allergies: PCN (rash)
Medications: Sumatriptan 50 mg prn HA; Fluticasone nasal spray daily
Social Hx: Smokes 1 PPD x 20 yrs; H/o of "alcohol problem, I don't want to talk about it"; denies illicit drug use; recently divorced- states "husband found another woman"; has 2 teenage sons; hates her job, but it "pays the bills"
Family Hx: Father, alive age 70 – alcoholic; Mother, alive age 69 – diagnosed with breast cancer age 65, status post lumpectomy, radiation, chemotherapy, currently on hormone treatment

ROS: As above

Vitals: Temp 97.4 HR 80 RR 14 98% RA BP 138/84 Ht 67 in Wt 200# BMI 31
Gen: A&Ox3, nontoxic, flat affect, appears uncomfortable when moves
HEENT: PERRL, EOMI, oral mucosa moist with no oral lesions, TMs clear, turbinates pink and moist
Neck: Supple, no JVD, no bruit, no LAD
CV: RRR with no murmur, gallop, or rubs; 2+ peripheral pulses DP/PT/radial; no edema, no calf tenderness
Lungs: CTA bilaterally, no wheezes, rhonchi, rales
Abdomen: Soft, +BS, NT/ND, no mass, hernia, or organomegaly. Noted low transverse scar on abdomen consistent with h/o hysterectomy; rectal exam with good sphincter tone
Back: Cervical and thoracic regions unremarkable; significant paraspinal muscle tenderness and spasm right paraspinal muscles greater than left; minimal tenderness to palpation of lumbar spinous processes; decreased range of motion (flexion, extension, side bend, rotation) of the lumbar spine; no increased pain with compression on head; straight leg test bilateral mild tightness in posterior thighs, mild discomfort in back, but no pain otherwise
Skin: No lesions or rashes
Neuro: CN 2-12 intact; no focal motor or sensory deficits; Patellar and Achilles reflexes +2/4 symmetric bilaterally

Please utilize the below link to the ACP/APS Low Back Pain Guidelines to answer below questions: http://www.annals.org/cgi/reprint/147/7/478.pdf

1. What are the definitions for low back pain regarding onset/chronicity and severity?
    a. Onset/Chronicity:
        - Acute
        - Subacute
        - Chronic

    b. Severity:
        - Nonspecific low back pain
        - Back pain potentially associated with radiculopathy or spinal stenosis
        - Back pain potentially associated with another cause (tumor, fracture, infection, ankylosing spondylitis)

2. What are some of the risk factors you would look for in a patient's history if you were concerned about:

    a. cancer causing low back pain
    b. vertebral infection causing low back pain
    c. vertebral compression fracture causing low back pain
    d. ankylosing spondylitis causing low back pain
    e. spinal stenosis
    f. herniated lumbar disc
    g. What is the most frequent finding in cauda equina syndrome? If a patient does not have this finding, what is the probability of cauda equina syndrome?

3. Are any of these factors present in the above patient?

4. What psychosocial factors may predict poorer low back pain outcomes? What factors are present in our patient?

You tell the patient she has nonspecific low back pain. Before reviewing the treatment plan, the patient asks if you can schedule her for an x-ray or MRI. She read on the internet this "is the best way to find out what's going on".

5. Would lumbar x-rays, CT, or MRI be indicated in our patient at this time? Why or why not?

6. When are these studies indicated?

7. How do you explain to the patient why you are not ordering imaging studies at this time? (The ACP has recently (2011) released a statement regarding imaging for this condition. Knowledge of this may help you in shared decision making discussions with this patient. http://www.annals.org/content/154/3/181.full.pdf

The patient states she understands why you are not obtaining imaging studies and now would like to know your treatment recommendations and whether or not "Percs or Oxys" would be helpful.

Utilize the below link to 2017 ACP guideline on low back pain noninvasive treatments to answer questions on non-pharmacologic and pharmacologic therapies:
http://annals.org/aim/article/2603228/noninvasive-treatments-acute-subacute-chronic-low-back-pain-clinical-practice

8. Is acetaminophen recommended for low back pain?

9. What medications have been found to be helpful for acute low back pain?

10. What non-pharmacologic therapies have been shown to be effective (even small effect)?

11. What advice would you give the patient on prognosis, self-management, and non-pharmacologic therapies?

12. Devise a medication regimen for the patient.

The patient is upset that you didn't mention narcotics in your medication regimen and starts yelling that "The IMC never helps me" and that you're "the worst doctor ever and don't know what you're doing". You double check to make sure you are between her and the door (quick escape route) and calmly explain (again) that narcotics are not indicated at this point in time and that she needs to try other medications first. Despite your calm demeanor, soft tone, non-confrontational approach, and attempts to formulate a plan that you can mutually agree on, she continues yelling and calls her boyfriend out in the waiting room who starts screaming at the folks staffing the registration windows that he is going to "come through the window and choke someone" if his girlfriend doesn't get what she wants. They rightly press the panic button up front (also one by Angie's desk and the old B side nurses station), activating the security team, who arrests the patient's boyfriend and comes into the exam room to help you further de-escalate her. After security's arrival and her boyfriend's arrest, she calms down and allows you an opportunity to enlist in shared decision making with her for her medications, which does not include narcotics.

13. What is your follow-up plan?

You note the patient misses her follow-up visit 4 weeks after initial visit. You have the IMC scheduler call and arrange another follow-up. Twelve weeks later (16 weeks after the original visit) the patient shows up in the IMC. The patient states she was slowly improving on your treatment regimen, but had a finger nail infection (paronychia) treated at the ER and was given Tramadol and noted this really seemed to help her back a great deal. She states she still has 6/10 dull ache in the low back (no fever, chills, weight loss) and now some mild right leg weakness. You perform a Hoover's test, and there is no down-going pressure of her left heel when she attempts to raise her right leg. Her exam is otherwise benign.

14. What is a Hoover's test?

15. What are some pharmacologic and non-pharmacologic treatment options for chronic low back pain?

    a. Which have moderate effects?
    b. Which have small effects?
    c. What non-pharmacologic therapies have moderate-quality evidence? Low quality?
    d. What pharmacologic therapies have moderate-quality evidence? Low quality?

16. The patient has worker's comp forms for you to fill out (stating now she believes the injury occurred at work). What is your response?

You offer the patient a NSAID and instructions on mindfulness based stress reduction. The patient again becomes very upset and states "the only relief I get is with the tramadol".

17. What are some risk factors for medication abuse in the patient's history?

You run an OARRS report and find that the patient has received over 10 different tramadol prescriptions over the last three months from 6 different providers. You confront the patient with this information, she bursts into tears stating she is addicted to tramadol and has been obtaining it "both from physicians and street pharmacists". She states she would like help getting off of the tramadol and with her depression.

18. What are some of our resources inside of the IMC for a patient like this, and what are some local referral options?

19. What medication would you start for her chronic low back pain and her depression?

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