Returning Veterans from Iraq

A crash course for caring for our Veterans in the non-VA primary care setting

Abby Spencer, MD
Carla L. Spagnoletti, MD
Melissa McNeil, MD, MPH
David Macpherson, MD, MPH

University of Pittsburgh
VA Pittsburgh Healthcare System
Overview of Workshop

- Brief didactic on experiences of returning veterans which are likely to contribute to their overall health
- Small-group interactive case-based discussions:
  - Infectious Exposures
  - Military Sexual Trauma and PTSD
  - Unexplained Symptoms
  - Hazardous Exposures
- Conclusions: Toolbox for the non-VA primary care provider on welcoming home returning veterans
- Evaluations-Please be sure to fill them out!
Goals from the participants…. 

- Are you seeing many Veterans in your practices?
- Do you have any particular questions or concerns that you hope will be covered today?
Caring for Returning Veterans

To better care for returning veterans, we must first understand where our patients have been and what they have experienced:

- Geography
- Climate
- Food and water supply
- Sanitation
- Hazardous plants and animals
- Endemic diseases and exposures
- Trauma of war
- Physical and Emotional Stressors
Iraq—Where is it?
Iraq

- Population: 21.8 million
- Average temperatures
  - Summer: 37-122 degrees
  - Winter: 25-109 degrees
- Water supply
  - 1/2 of population uses raw surface water
  - Local treatment plants unreliable
- Sanitation
  - Sewage pumping stations unreliable
  - Indiscriminate dumping of garbage
Understanding Exposures

- Physical hazards
  - She’s carrying an 80lb Sack
  - Traumatic injuries
- Emotional hazards
  - Separation
  - Isolation
  - Death and Dying
- Chemical hazards
Endemic Diseases to Iraq

We have prophylaxis for:
- Malaria (90% vivax)
- Measles
- Mumps
- Typhoid fever
- Rabies
- Hepatitis A
- Diptheria

We are comfortable with:
- Syphilis
- Tuberculosis
- Leishmaniasis
- Cytomegalovirus
- Giardiasis
- Schistosomiasis
- Sand fly fever
- Strongyloidiases
- Trichostrongyliases
- Hookworm
- Leprosy
- Echinococcosis
Air Pollution
Living Conditions
Living Conditions
Appreciate the Stressors

- Carrying an M-16 rifle and always prepared to use it
- Frequent decisions under pressure that have life or death consequences
- Battle/Combat
- Exposure to death and injury
- Loss of comrades
- Perceived exposure to WMD’s
Appreciate the Stressors

- Noise
- Lack of sleep –rotating shifts every 4 hours
  - Remember intern year?
- Physical fatigue
- Dehydration
- Eating conditions and food choice
- Hygiene –generally not available
  - Issues of menstruation, UTI’s etc
- No change of clothes
Life During Deployment
A day in the life....
Evaluation of Persian Gulf I

- In 1995, National Health Survey of Gulf War veterans was initiated.
- Compared the health of 15,000 deployed and 15,000 nondeployed veterans.
- Surveyed by mail and telephone.
- Found that deployed veterans reported a higher prevalence of 29 of 31 medical conditions and 48 symptoms.
Evaluation of Persian Gulf I

Subset of these patients was invited to come to their local medical center for a physical and laboratory examination.
Evaluation of Persian Gulf I

Comparison of deployed vs non deployed found that deployed veterans were:

- Slightly younger (38.9 vs 40.7 yrs)
- Less educated (32.5% vs 42% were college graduate or postgraduate)
- Less likely to be married (67.4% vs 72.3%)
- Reported a lower annual income ($46,800 vs $52,000)
# Self Reported Illnesses

<table>
<thead>
<tr>
<th>Illness</th>
<th>% Deployed</th>
<th>% Non</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibromyalgia</td>
<td>0.6</td>
<td>0.8</td>
<td>&gt;0.2</td>
</tr>
<tr>
<td>CFS</td>
<td>2.3</td>
<td>0.4</td>
<td>0.005</td>
</tr>
<tr>
<td>Rash</td>
<td>39.8</td>
<td>27.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Gastritis</td>
<td>5.9</td>
<td>4.2</td>
<td>&gt;0.2</td>
</tr>
<tr>
<td>Hypertension</td>
<td>10.2</td>
<td>11.0</td>
<td>&gt;0.2</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>0.6</td>
<td>0.2</td>
<td>&gt;0.2</td>
</tr>
<tr>
<td>Asthma</td>
<td>5.9</td>
<td>6.3</td>
<td>&gt;0.2</td>
</tr>
</tbody>
</table>
## Illnesses on Clinical Evaluation

<table>
<thead>
<tr>
<th>Illness</th>
<th>% Deployed</th>
<th>% Non</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibromyalgia</td>
<td>2.0</td>
<td>1.2</td>
<td>0.19</td>
</tr>
<tr>
<td>CFS</td>
<td>1.6</td>
<td>0.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Rash</td>
<td>34.6</td>
<td>26.8</td>
<td>0.05</td>
</tr>
<tr>
<td>Dyspepsia</td>
<td>9.1</td>
<td>6.0</td>
<td>0.05</td>
</tr>
<tr>
<td>Hypertension</td>
<td>9.1</td>
<td>12.6</td>
<td>0.07</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>6.5</td>
<td>5.2</td>
<td>&gt;0.2</td>
</tr>
<tr>
<td>Asthma</td>
<td>4.5</td>
<td>5.9</td>
<td>&gt;0.2</td>
</tr>
</tbody>
</table>
Data from Persian Gulf II is incomplete

- Returning Veterans have presented to the VA with a wide range of both medical and psychological conditions

- Health problems have encompassed more than 6,500 discrete ICD-9 diagnostic codes
Most common health problems of returning veterans:

- Musculoskeletal ailments
- Dental problems
- Ill-defined symptom complexes
- Gastrointestinal complaints

- Mental Health
  - Depression
  - PTSD
  - Drug abuse/dependence
  - Neurotic disorders
  - Alcohol dependence
  - Sexual disorders
  - Acute reaction to stress
Gender specific complaints

- Women Veterans:
  - Urinary tract infections
  - Abnormal menses
    - Most common outpatient presenting complaint for women
    - Irregular menses related to erratic contraception availability as well as anovulation from increased physical and emotional stressors
    - Women expect menses to become regular as soon as they return; while generally not significant pathology, poses great concern to patients
Take Home Points

- Appreciate potential exposures
- Common medical conditions are common
- Unique exposures include:
  - Infectious Exposures
  - Military Sexual Trauma and PTSD
  - Unexplained Symptoms
  - Hazardous Exposures
Case Discussions
Infectious Diseases in Returning Iraq Soldiers

David Macpherson, MD, MPH
Professor of Medicine
University of Pittsburgh
VA Pittsburgh Healthcare System
Case 1

- A 24 year old male presents to your office having returned from Iraq 4 months ago with a skin rash.
- While in Iraq, he spent 2 months of his 1 year tour in a tent and was stationed mostly in and around Baghdad.
- The rash began 2 months after returning from Iraq. He reports 3 separate lesions on his arms and legs each appearing at different times.
Case 1 continued

- The lesions grew slowly in size and began as nodules. One of the lesions opened and has not healed.
- When you ask if he was bitten by sand flies, he chuckles and rolls his eyes like your adolescent daughter.
- His mother told him the sores were not healing because he was picking at them.
Case 1 continued

- His past medical history is unremarkable. He takes no medication. He smokes ½ pack per day and drinks 2-3 beers on weekends only.
- On exam, he is afebrile, has a normal heart rate and blood pressure and appears well.
- His chest, heart and abdominal exam is unremarkable including the absence of hepatosplenomegaly.
Case (continued)

- His skin exam shows 2 nodules 0.5 and 1.5 cm in diameter on his right arm and a 2.0 cm open ulcer on his left arm. An eschar covers the open ulcer which has erythematous boarders.

- A 0.5 cm epitrochlear node is palpable in the left arm.
Questions/Answers

1. The delayed onset of appearance of the skin lesions is unusual and points away from Leishmoniasis: T/F?
2. The arms and legs are common sites of leishmaniasis because:
3. In the absence of any treatment, this patient's skin lesions would be likely to heal in:
4. To diagnose cutaneous leishmaniasis the usual diagnostic test is:
5. Which of the following statements are true?
6. Which of the following statements is true about visceral leishmaniasis:
7. Which of the following laboratory findings is not characteristic of visceral leishmaniasis:
8. The correct spelling of the likely diagnosis is:
Cutaneous Leishmaniasis
Transmission

- Sandfly’s (species name Phlebotomus) seek a meal at dusk and bite an infected human or animal and ingest amastigotes
- In sandfly gut, amastigotes transform to flagellated promastigotes
- Sandfly then bites human and promastigotes are regurgitated
- Promastigotes phagocytized by macrophages
- Promastigotes transformed to amastigotes in macrophages
- Macrophage then activate T cells leading to inflammatory response
Sand Fly Epidemiology

- Sand fly traps positioned near locations of soldiers.
- Over 65,000 sand flies collected
- Most common sand fly species were species known to carry leishmaniasis (Phlebotomos papatasi, P. alexandri, and P. sergenti)
- Overall infection rate in sand flies was 1.4%

Arch Dermatol 2004; 140: 135
The Sandfly
Human Epidemiology

- 600+ proven cases of cutaneous leishmaniasis reported in US Soldiers
- Self reported survey of 15,459 soldiers, 2.1% reported leishmaniasis
- Incidence of cases has decreased in past year

Clinical Findings
Cutaneous Leishmaniasis

- Sandfly bite develops into papule and over 1-3 months enlarges to a nodule which then ulcerates.
- Plaque lesions and hyperkeratotic or wart like lesions can also occur.
- Lesion appear on exposed skin (arms, neck, legs).
- Up to several lesions can be present at different stages.
Appearance

Appearance


Figure 7: Cosmetically important cutaneous lesions for which treatment is nearly always requested or given. (A) Multiple lesions (L. major, Israel) on both legs of woman shown in figure 2, D (courtesy of P Smith). See biopsy result in figure 6, A. (B) Large lesion (probably L. panamensis, Colombia) on young girl's face (courtesy of J Villanueva). See scraping result in figure 6, C. (C) Ear lesion ("chiclero ulcer"); L. mexicana, Belize, in a travelling US college student. See imprint result in figure 6, D.
Diagnosis

- No reliable serologic test
- Skin biopsy technique (per US Army)
  - Clean with alcohol
  - Debride exudate from open ulcer
  - Anesthetize with lidocaine and epinephrine
  - Horizontally scrape base of ulcer with #15 scalpel ("light enough to create an exudate but not heavy enough to cause bleeding")
  - Thinly apply in circular manner to dime size area on slide
- Diagnostic services available through Walter Reed at www.pdhealth.mil/downloads/Leishmaniasis_DS_04272004.pdf
Amastigotes in Macrophages

Promastigotes in Macrophages

Pathology Findings

Treatment

- Treatment indicated to accelerate healing and prevent scarring
- Shared decision with soldier as some treatments toxic
- Old lesions with evidence of healing need not be treated
Treatment (continued)

- Small lesions can be treated with cryotherapy (two 30 second applications).
- Fluconazole 200 PO qd x 6 weeks proven in L. major infections but not FDA approved (see Abdulrahman, et al. NEJM 2002; 346: 891)
Treatment (continued)

- More severe lesions can be treated with pentavalent antimony (Pentostam®)
- Only available thru research protocol at Walter Reed Medical Center
  - COL Alan Magill  301-319-9959 or alan.magill@na.amedd.army.mil
- 10-20 days of intralesional injections
- Myalgias common during treatment 10% of soldiers discontinue
Summary Points

- Cutaneous leishmaniasis presents as nodules and ulcers which may appear and progress after return.
- The infection is transmitted thru sand flies which are common in Iraq.
- Diagnosis is made thru scraping of the base of a lesion and pathology review.
- Treatment is not always necessary but can accelerate healing and prevent scaring.
- Visceral leishmaniasis can develop in immune compromised individuals but is very rare in returning soldiers.
Military Sexual Trauma and PTSD

Abby Spencer, MD
Instructor of Medicine
GIM/Women’s Health Fellow
University of Pittsburgh
VA Pittsburgh Healthcare System
Case 2

A 29 year old woman recently returning from 10 months of service in Iraq presents to you to establish care. She is talkative, in good spirits and reports no complaints. She is happily married. You wonder if you really need to screen her for military sexual trauma.
Questions

1. Which of the following is **NOT** a clinical reason for screening all veterans for a history of military sexual trauma?

2. When screening a patient for MST, primary care clinicians should:

3. Immediately after a patient states that she has experienced MST, an appropriate initial response by the clinician might be:

4. Which of the following symptoms are **NOT** documented to be more frequent among women with sexual trauma histories?

5. Which of the following statements is true?

6. Which of the following procedures are LEAST likely to increase PTSD symptoms for individuals with a history of MST?
Questions

7. Which of the following types of therapy does NOT have strong empirical support for its effectiveness as a treatment for PTSD?

8. Which of the following statements about the consequences of applying for VA disability benefits on the basis of MST is NOT true?

9. Which of the following is NOT an appropriate action for a primary care provider when managing the care of a veteran with MST?

10. Medical interventions may cause a PTSD flare causing irritability, anxiety, or a withdrawn affect. What should a primary care clinician do if a patient starts to dissociate while the clinician is performing a breast exam?
What is Military Sexual Trauma?(MST)

- As defined by the Department of Veterans Affairs:
  - “Sexual harassment that is threatening in character or physical assault of a sexual nature that occurred while the victim was in the military, regardless of geographic location of the trauma, gender of the victim, or the relationship to the perpetrator.”
How common is MST?

- Rates of sexual assault while in the military are higher than lifetime rates among women in the general population.

- About 1 in 4 women veterans have experienced MST.

- Among active duty military:
  - ~ 5-6% of women have experienced military sexual assault in one year.
  - ~ 78% military sexual harassment.
Is MST unique to women?

- 2002 National MST surveillance data from ~1.7 million VA patients:
  - 22% of women & 1% of men experienced MST
  - HOWEVER, about 20 x more men in the VA system, so actual numbers of men and women who screen positive for MST in the VA are about equal
  - 54% of all VA patients who screen positive for MST are men
Why should I ask?

- Exposure to violence effects **physical** health
- Sexual trauma is associated with increased rates of **psychological** distress
- Acknowledging sexual trauma history can be validating for the patient
- May improve patient-provider relationship
### Physical symptoms associated with Sexual Trauma

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chronic Pain</strong></td>
<td>Low back pain, headaches, pelvic pain</td>
</tr>
<tr>
<td><strong>Gynecologic</strong></td>
<td>Sexual dysfunction, menstrual abnormalities, menopausal symptoms, reproductive difficulties</td>
</tr>
<tr>
<td><strong>Gastrointestinal</strong></td>
<td>Diarrhea, indigestion, nausea, swallowing difficulties, irritable bowel</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Chronic fatigue, sudden weight changes, palpitations</td>
</tr>
</tbody>
</table>
Psychological Consequences of Sexual Assault

- Depression
- Post-Traumatic Stress Disorder (PTSD)
- Panic Disorder
- Generalized Anxiety Disorder
- Obsessive-Compulsive Disorder
- Substance abuse and Dependence
- Eating Disorders
Common Reactions to Sexual Assault

- Self-blame and shame
- Difficulties with trust
- Denial or normalization of the trauma
- Poor self-esteem or body image
- Sexual dysfunction
- Impulsivity
- Anger
- Work difficulties
- Problems with readjustment after military service
- Perpetration of violence
- Gender identity fragility (especially in men who have experienced same sex assault)
Why should I ask?

- Sexual trauma can have complex effects on provider/patient interactions:
  - Routine medical exams and procedures like colonoscopy, dental exams, and pap smears might terrify survivors.
  - Frustrating behaviors may become less perplexing and more amenable to intervention when understood in the context of a trauma history
    - heavy health care utilization
    - poor adherence to lifestyle modifications
    - boundary issues
Why Should I ask?

- Patients reluctant to discuss details of their traumas may still benefit from mental health treatments that focus on improving coping skills
How should I ask?

- Won’t I upset the patient if I ask?
  - The majority of men and women would like their physicians to ask routinely

- How do I avoid being offensive?
  - Set the stage for inquiry: “Unwanted sexual experiences are far more common than previously thought, so I ask all my patients about this.”
How should I ask?

- Ask behaviorally specific questions, avoid terms such as rape or trauma:
  - “Has anyone ever made you have sex, or do something of a sexual nature, that you didn’t want to do using force or threatening harm?”
How shouldn’t I ask?

- **Negative Questioning:** “You were never sexually assaulted, were you?”

- **Labeling:** Don’t use phrases such as “people like you”.


Responding to MST Disclosure

1. Be non-judgmental and validating:
   - “No one deserves to be hurt that way”
   - “I’m sorry that happened to you”

2. Assess current status, including health sequelae of trauma:
   “Do you feel that you are currently having physical or emotional effects from what happened to you?”

3. Assess level of support:
   “Have you been able to discuss this with anyone previously?”
How do I avoid opening Pandora’s Box?

- Do not probe for details or specifics regarding the assault.
- Do not ask if the patient reported the assault.
- If the patient begins to disclose in great detail (moment by moment account) or appears profoundly distressed, the clinician should limit the disclosure process.
How do I avoid opening Pandora’s Box?

“I’m glad you are willing to share this information with me as it will help me do a better job in providing your medical care. I am going to ask that we not discuss the details of this trauma today, because that is best done with a counselor who has special training in knowing how to help you work though a very upsetting past experience. Many of my patients who have had experiences like yours have found it very helpful to talk with one of our counselors. Would you be interested in that?
Who is eligible and how do they access care for MST?

- Every VA has a MST coordinator
- Any veteran who reports experiencing MST can apply for counseling and treatment of any MST-related injury, illness, or psychological condition

  - Without obligation for co-payment
  - Veterans who may not be eligible for VA services are eligible to receive this particular benefit
  - Sexual trauma counseling is provided even if a veteran did not report the incident
  - Counseling services may be contracted to community providers if receipt in a VA facility is not feasible
Which patients need a mental health referral?

- Primary care providers see three classes of patients:
  - Patients who:
    1. Have processed the trauma and are currently doing well
    2. Seem to be doing well, but actually have undetected current distress related to the prior MST (silent suffering)
    3. Have obvious current psychological distress (anxiety, interpersonal difficulties) or diagnosed psychiatric conditions (PTSD)
Which patients need a mental health referral?

- Clinicians should offer mental health referral to all MST survivors, even in the absence of current symptoms.
  - Not all victims of MST want or need the help of a mental health specialist.
  - Many patients who appear to be doing well may be experiencing considerable emotional distress and are struggling to function.
  - Referral is especially important if active psychological symptoms are identified.
Primary Care PTSD Screen

In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you…

1. Have had nightmares about it or thought about it when you did not want to?
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?
3. Were constantly on guard, watchful, or easily startled?
4. Felt numb or detached from others, activities, or your surroundings?

Positive response to two items suggests patient may have PTSD and should undergo additional evaluation
Mental Health Referral Strategies

- **Normalize:** “Many of my patients who had similar experiences have found it helpful to speak with a counselor.”

- **Consider patient’s agenda:** “You said fatigue is your biggest concern. Many people who’ve had traumatic experiences find disturbing memories can be a factor in their fatigue, and learning some coping and stress reduction techniques can help.”

- **Reassurance:** “I would like to evaluate you for several of the conditions that can cause diarrhea. In addition to stool and blood tests, I would suggest that we also connect you with a counselor who can explore with you whether stress could be a factor as well.”
Strategies to Address Barriers to Referral

- **Shame:** “You have been struggling alone with this for a long time. Treatment can improve symptoms and help you cope”.

- **Being seen by mental health means I’m crazy:** “People seek help because they want to feel better. Wanting to feel better is not crazy at all”.

- **Nothing will help, the trauma has already occurred:** “It’s true that you can’t change your past, but you can learn to live with it in a different way which can help improve your symptoms”.
What should your patients expect?

- Patients who know what to expect are more likely to follow through with mental health referrals
  - Patients may pursue individual therapy or group therapy
  - Cognitive behavioral therapy (CBT) has proven to be very effective in reducing symptoms of PTSD
What should your patients expect?

- Explain medications that may be started
  - SSRI’s are first line treatment for PTSD
  - SSRI’s improve all three PTSD symptom clusters including re-experiencing, avoidance/numbing, and hyper-arousal
    - Paxil is very effective with anger, rage, impulsivity, nightmares, and suicidal ideation
  - Symptoms usually improve in 6-10 weeks, continue treatment for about 12 months
  - Benzodiazapenes do NOT have proven efficacy for the treatment of re-experiencing and avoidance/numbing symptoms
What primary care docs need to know about compensation

- Eligibility
  - Veterans who develop health, occupational, or social impairments because of MST

- Documentation
  - MST and presumed sequelae to support future claims

- Advocates
  - To guide them through the compensation and pension process

- Clinical Effects
  - PTSD symptoms may worsen during claims process
Eligibility

- All veterans are eligible for MST counseling, care, and services related to the trauma.
- Veterans who develop health, occupational, or social impairments because of MST may be eligible for VA disability benefits.
- Preexisting illnesses may still be eligible for compensation if the illness was aggravated by the MST.
Should PCP’s encourage patients to file claims?

**Advantages**
- Enhanced access to VA health care
- Potential compensation and improved economic stability
- Validation of veteran’s disability, sacrifice, heroism, service to their country

**Disadvantages**
- Must discuss their trauma in detail in non-therapeutic environment
- Exacerbation of symptoms
- Distress and feelings of betrayal if claims are denied
### Documentation

<table>
<thead>
<tr>
<th>What to Document</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical diagnoses plausibly associated with or exacerbated by MST</td>
<td>STDs, Infertility</td>
</tr>
<tr>
<td></td>
<td>Chronic pelvic pain</td>
</tr>
<tr>
<td></td>
<td>Somatization</td>
</tr>
<tr>
<td></td>
<td>Sexual dysfunction</td>
</tr>
<tr>
<td></td>
<td>Low back pain, Migraines</td>
</tr>
<tr>
<td>Signs/Symptoms of psychiatric illness</td>
<td>Panic attacks, Depression, Nightmares, Avoidance</td>
</tr>
<tr>
<td>Signs/Symptoms consistent with MST</td>
<td>Refusing intrusive exams, old fractures, scars, substance abuse, Mistrust</td>
</tr>
</tbody>
</table>
Take Home Points

- MST can manifest as a multitude of physical, psychological, and social symptoms
- Screen all returning veterans for MST regardless of symptoms
- Be prepared for positive responses
- Recognize signs and symptoms of PTSD
- Refer for counseling
- Discuss potential benefits and consequences of filing the assault with the VA
Resources

- [www.va.gov](http://www.va.gov) or [http://www.va.gov/WOMENVET](http://www.va.gov/WOMENVET)
- Information about VA benefits and the claim process can be obtained by calling 1-800-827-1000.
- **1-877-222-VETS**: Women Veterans Program Managers at most VA Medical Centers are available to help women veterans access their benefit entitlements and counsel women veterans seeking treatment and benefits.
Medically Unexplained Symptoms

Carla L. Spagnoletti, MD
Women’s Health Fellow
VA Pittsburgh Healthcare System
Case 3

- 26 y.o. female veteran presents with a 6 month history of:
  - Fatigue
  - Headache
  - Diffuse joint aching
  - Sore throat
  - Constipation and bloating
  - Difficulty sleeping

- Symptoms began about 3 months after she returned from an 8-month tour of duty in Iraq

- She was not directly involved in combat and denies known exposure to biological agents or infectious diseases
Case-Continued

- Past medical history is unremarkable
- She takes ibuprofen, docusate, and occasionally diphenhydramine at night to help her sleep
- Social history: non-smoker, non-drinker, no illicit drugs; single, currently attending community college, lives alone
- Sexual history: 2 lifetime male partners, not currently sexually active, no military or other sexual trauma
- Family history: mother and brother with depression
Case-Continued

- Physical exam was remarkable for a mildly erythematous posterior oropharynx and 3 small tender cervical lymph nodes, noted on two separate occasions
- Remainder of exam, including heart, lung, abdomen, breast, pelvic, and neurologic exams were unremarkable
- Routine labs including CBC, lytes, LFT’s, as well as ESR were normal
Questions

1. A diagnosis of medically unexplained symptoms (or related syndrome) can only be made if the patient has no abnormalities on physical exam: True/False

2. Each of the following tests should be performed as part of the initial diagnostic work-up in a patient with suspected medically unexplained symptoms (or related disorder), EXCEPT:

3. Each of the following is helpful in the management of medically unexplained symptoms (or related disorder), EXCEPT:
Objectives

- Review what is known about “medically unexplained symptoms” (MUS) in the context of the 1st Gulf War
- Outline a general diagnostic approach to MUS
- Focus on Chronic Fatigue Syndrome (CFS) and Fibromyalgia (FM) as possible diagnoses that can be established in those with MUS
- Provide a list of resources that are helpful to the provider who cares for patients with MUS and related disorders
Medically Unexplained Symptoms

- Also referred to as medically unexplained illnesses, medically unexplained physical symptoms, undiagnosed illnesses, “Gulf War syndrome”
- Poorly understood “war syndromes” characterized by multiple physical symptoms have been reported since the US Civil War
- Most research on this subject has come as a result of the MUS experienced by Gulf War veterans
MUS: Most frequently, veterans report a combination of:

- Memory loss
- Headache
- Fatigue
- Skin rash
- Muscle/joint pain
- Sleep disturbance
- Diarrhea and other GI symptoms
- Shortness of breath
- Chest pain
- Choking sensitivity
- Abdominal pain
- Cough

MUS prevalence rates in Gulf War veterans may be as high as 30-50%
MUS

After extensive epidemiologic research involving Gulf War veterans with such complaints, the following conclusions have been reached:

- No evidence has been found that MUS represent any new or unique syndrome
- Veterans deployed to the Persian Gulf reported MUS at a higher rate than those deployed to other areas of the world and non-deployed veterans
- MUS have not been correlated with any specific period during Operation Desert Storm and Desert Shield
- MUS have not been associated with exposure to biological or chemical weapons or antidotes, depleted uranium, infectious diseases, pesticides, or vaccines
Applicability to Iraqi Veterans

- Many have served in the same areas of the world as those Gulf War veterans who have returned with MUS

- The DoD says it is much better prepared to prevent, recognize, and treat such problems than they were 15 years ago
  - Environmental monitoring
  - Improved record-keeping
  - Better understanding of effective treatment
General Approach to MUS

- Clarify symptoms and physical exam
- Perform psychosocial assessment
  - Many patients have coexisting depression and/or anxiety
- Obtain focused diagnostic tests, including:
  - CBC, lytes/BUN/creat, LFT’s, TSH, ESR, U/A
  - Only if history/PE strongly suggest need:
    - EBV serologies, Lyme serologies, immunologic function testing, neuroimaging
General Approach to MUS

- Consider diagnosis of known condition or disease
  - Many with these complaints meet criteria for one or more known diagnoses, including:
    - Chronic fatigue syndrome
    - Fibromyalgia
    - Depression
    - Irritable bowel syndrome
    - Headache
    - PTSD
    - Panic disorder
General Approach to MUS

- Consider initiating symptom-based treatment
  - Early interventions include restoration of sleep and management of pain
- Build therapeutic alliance
  - Schedule frequent visits, encourage open and honest transfer of information, explain all test results
  - Acknowledge that symptoms are real
  - Avoid debate over psychogenic vs. organic origin of symptoms
Chronic Fatigue Syndrome

Definition:

- Clinically evaluated, unexplained, persistent or relapsing fatigue that is of new or definite onset
- Is not the result of ongoing exertion
- Is not alleviated by rest
- Results in substantial reduction in previous levels of occupational, social, or personal activities
Chronic Fatigue Syndrome

- Definition-continued
  - 4 or more of following that persist or reoccur during six or more consecutive months and do not predate the fatigue:
    - Low grade fever (37.5 to 38.6) or chills
    - Non-exudative pharyngitis
    - Palpable tender cervical or axillary nodes (up to 2 cm)
    - Neuropsychiatric complaints (self-reported short term memory or concentration impairment, photophobia, irritability)
    - Muscle pain/weakness
    - Migratory arthralgias
    - Headache
    - Sleep disturbance
    - Post-exertional malaise lasting >24 hours
Chronic Fatigue Syndrome

- **Treatment:**
  - Goal is symptom management, not cure
  - Cognitive Behavioral Therapy (CBT)
  - Graded aerobic exercise
  - Treat underlying depression/anxiety
  - Sleep education
  - +/- Low-dose TCA (amitriptyline 10 to 25mg/d)

- **Prognosis:**
  - Complete resolution is rare, although most show long-term improvement in symptoms (2-4 years)
Fibromyalgia

- **Definition (American College of Rheumatology):**
  - Widespread pain of at least 3 months duration (must be bilateral, above and below waist, and axial)
  - Pain in 11 of 18 tender point sites on digital palpation

- **Concurrent symptomatology is almost universal:**
  - Fatigue, headache, dyspepsia, IBS, heartburn, paresthesias, audio/ocular/vestibular complaints, allergic and chemical/photo sensitivity, non-cardiac chest pain, palpitations, chronic sinusitis, irritable bladder, affective/somatoform disorders
Tender Points

(will insert diagram here)
Fibromyalgia

- **Treatment:**
  - CBT
  - Low-dose TCA
  - Graded aerobic exercise
  - Tramadol, acetaminophen, NSAIDs
  - SSRIs
  - Sleep education
  - Acupuncture, biofeedback, tender point injections, stretching, massage, relaxation therapy, spinal manipulation

- **Prognosis:**
  - Similar to CFS
Summary

- Medically unexplained symptoms are common among veterans
- Many with MUS can be diagnosed with a known condition such as CFS or FM
- If CFS or FM is diagnosed, treatment guidelines are well-established
- If no diagnosis is made, treatment should be symptom-based
Resources

- VA/DoD Clinical Practice Guidelines for the Management of Medically Unexplained Symptoms
- Center for Disease Control and Prevention
  - CFS line: 404-639-1338
- National CFS and Fibromyalgia Association
  - 3521 Broadway, Suite 222, Kansas City, MO 64111, 816-931-4777
References

- UpToDate 13.3
Exposures in Persian Gulf Veterans

Melissa McNeil, MD, MPH
Professor of Medicine
University of Pittsburgh
VA Pittsburgh Health Care System
Case 4

- A 25 year old male presents to you to establish care. He recently returned from a tour of duty in Iraq. He is currently unemployed, looking for work, and having difficulty finding a job.

- He describes intermittent headaches, irritability, and trouble concentrating. He is having trouble integrating into civilian life.

- You ask about his experience in the military.
Case 4

- He was part of a tank crew and was exposed to heavy shelling. Part of his job was salvaging damaged tanks.
- He also reveals that he was in fact injured in the line of duty. He was twice rendered unconscious during the course of battle due to head injuries. Neither injury required hospitalization.
Case 4

- Your patient specifically asks you if his symptoms are due to his military service; in particular, he wants to know if he is at risk for depleted uranium exposure since he has been reading about this.
- Where do you go from here?
Questions

- How do you know if he is at risk for exposure to depleted uranium?
- What problems might he face if he has been exposed?
- How would you further evaluate him?
- Is there anything else in your differential of his symptoms?
- Are you concerned about his head injury?
- Would you evaluate him any further for his symptoms? If so, how?
Objectives

Depleted Uranium Exposure

- Review the settings in which exposure is likely to occur
- Discuss the medical consequences of exposure
- Outline procedures for evaluation if exposure is suspected
Depleted Uranium

- Depleted uranium (DU) is derived from the heavy metal uranium.
- It is the natural uranium left over after more of the highly radioactive uranium isotopes used in power plants and weapons are extracted.
- DU contains about half the radioactivity of natural uranium; it is considered very low level radiation.
- However, as with other heavy metals such as lead, it can be toxic to kidneys and lungs.
Depleted Uranium

- DU was first used in the development of major weapons because of its high density and superior mechanical properties.
- Troops exposed in several ways:
  - Injured by friendly fire
  - Crew members in close contact with munitions in tanks or other vehicles
  - Smoke /particulate exposure from DU weapon
Depleted Uranium

- Health effects from exposure come from miners
- Did find that uranium could affect the kidneys and the lungs including increased lung cancer risk
- Veterans are different: short, less intense exposure; miners have mixed exposure (radon and other toxic substances in mines)
- To date, no specific health consequences have been identified in exposed veterans
DU Screening Program

- Veterans concerned about exposure should be referred for screening
- Screening consists of:
  - Gulf War registry examination
  - DU exposure questionnaire
  - 24 hr urine collection for total uranium
DU Screening Program

- This is available through your nearest VA hospital; contact the Persian Gulf Coordinator.

- In particular, the Baltimore VA has established a long term surveillance program to evaluate the impact of DU exposure and more information is available through this program.
Your Patient

- So you reassure your patient that to date no harmful effects of depleted uranium have been reported, but promise to help him enroll in a registry of veterans so exposed.
- You are more concerned about his head injuries and ask for more details.
Objectives

Traumatic Brain Injury
- Review the spectrum of injury in patients with traumatic brain injury
- State common behavioral problems associated with damage to the various areas of the brain
- Describe the course of cognitive recovery following traumatic brain injury
Traumatic Brain Injury (TBI)

- Significant problem in veterans
- 1992 survey of discharged military personnel found among active duty males aged 18-24 a hospitalization rate for TBI of 234/100,000
- Rate 150/100,000 for active duty military females of the same age
Mild Traumatic Brain Injury

- Approximately 80% of patients who sustain injury have had a mild TBI
- Believed to result when injury triggers the pathologic neurochemical cascade but is insufficient to produce widespread dysfunction
- May appear insignificant but may result in persistent and disabling symptoms
Diagnostic Criteria for Mild Traumatic Brain Injury

Traumatically induced physiologic disruption of brain function by:

- Any period of loss of consciousness
- Evidence of post traumatic amnesia
- Any alteration in mental state at time of accident
- Focal neurologic deficits that may be transient

Severity of loss does not exceed:

- Loss of consciousness for 30 min
- Post traumatic amnesia of 24 hours
- GCS of 13-15 after 30 minutes
Symptoms

- Frontal Lobes
  - Ability to focus, organize, plan, problem solve, judgment

- Temporal Lobes
  - Putting down new memories; language functions (word finding, naming); increased irritability and aggression

- Parietal Lobes
  - Information processing, ability to understand spoken and written word
Symptoms

- Occipital Lobes
  - Reception and processing of visual information; inability to recognize objects

- Cerebellum
  - Coordination, gait, problems with everyday tasks
Course of Recovery

- Gradual process that occurs for at least 18-36 months as the brain recovers and regenerates
- Most rapid over the first 6 months when 80-85% of the recovery occurs
- Presence of persistent symptoms varies
# Post Concussive Syndrome

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor concentration</td>
<td>71%</td>
</tr>
<tr>
<td>Irritability</td>
<td>66%</td>
</tr>
<tr>
<td>Fatigued</td>
<td>64%</td>
</tr>
<tr>
<td>Memory problems</td>
<td>59%</td>
</tr>
<tr>
<td>Headaches</td>
<td>59%</td>
</tr>
<tr>
<td>Trouble thinking</td>
<td>57%</td>
</tr>
<tr>
<td>Blurry or double vision</td>
<td>45%</td>
</tr>
<tr>
<td>Sensitivity to bright light</td>
<td>40%</td>
</tr>
</tbody>
</table>
Differential Diagnosis of PCS

- Post Traumatic Stress Disorder
  - PCS not associated with persistent reexperiencing accident or numbing

- Major Depression
  - Not associated with changes in weight, psychomotor agitation, suicide

- Disability Seeking or Overt Malingering
  - Can be differentiated on neuropsych tests
  - Remember, patients with legitimate post injury symptoms may amplify their difficulties
What to Do if You Suspect PCS?

- Full history and physical
- Careful attention to questions about PTSD and depression
- Refer for formal neuropsychological testing
Returning Veterans from Iraq
A crash course for caring for our Veterans in the non-VA primary care setting

Conclusions

University of Pittsburgh
VA Pittsburgh Healthcare System
How We Welcome Home our Veterans

- Ask for details of deployment, location, exposures, injuries
- Ask about stressors and coping responses
  - Assess substance use
- Ask about interpersonal violence
- Ask about psychosocial factors
- Ask about pertinent ROS
ROS for Returning Veterans

- **Skin** –
  - topical agents, chemical exposure, chronic bacterial/fungal diseases, leishmaniasis, cutaneous anthrax, antibiotic photosensitivity

- **HEENT** –
  - chronic conjunctivitis, UV keratitis, noise-induced hearing loss

- **Lungs** –
  - exacerbation of asthma, TB, smoking

- **Heart** –
  - caffeine intake, palpitations, nutrition/cholesterol
ROS for Returning Veterans

- **GI –**
  - dietary changes, parasitic infections, antibiotic side-effects, IBS, diarrhea, pain

- **GU–**
  - kidney stones, chronic vaginitis, STDs, UTI’s, amenorrhea, infertility, sexual trauma

- **Musculoskeletal –**
  - sports injuries, overuse syndromes, back injuries from carrying weapons and backpacks, traumatic injuries

- **Psychiatric –**
  - reintegration problems, PTSD, insomnia, isolation claustrophobia, traumatic brain injury, depression
Useful Web Sites

- General VA Benefits and information  http://www1.va.gov/health_benefits/
- General VA site for returning solders with many useful links  
  http://www.seamlesstransition.va.gov/
- PTSD information for clinicians and patients  
  http://www.ncptsd.va.gov/topics/war.html
- Army Wounded Warrior Program-oriented more toward combat injured veterans  
  https://www.aw2.army.mil/
- Contact the VA site-has good FAQ section  
- Walter Reed Medical Center Main site  http://www.wramc.amedd.army.mil/
- VA site with links to information on environmental exposures including unexplained symptoms from potential exposures, depleted uranium.  
  http://www1.va.gov/environagents/
- Links to VA reports and handbooks on gulf war illnesses and exposures.  
  http://www1.va.gov/gulfwar/
- Gulf War Medical Research Site  http://www.gulflink.osd.mil/medsearch/
- Post Deployment Web site  
  http://www.pdhealth.mil/clinicians/default.asp