



CHRONIC / ACUTE CONDITIONS

Treating Gulf War Illness: The Lasting Effects of Desert Shield/Storm

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Clinical and registry programs indicate that 25 percent of the 700,000 veterans of the first Gulf War (Operation Desert Shield/Storm, years 1990-1991), have been affected by clusters of symptoms, and co-morbid medical diagnoses. Symptoms include chronic fatigue syndrome, fibromyalgia, irritable bowel syndrome, arthralgia, digestive complaints, and mood-related psychiatric disorders, including depression, post traumatic stress disorder (PTSD), and other anxiety disorders.^{1,2}

Gulf War Illness (GWI) is a complex and difficult medical condition to treat, with highly individualistic symptom presentations, including fatigue, sleep and mood disturbances, cognitive dysfunction, and musculoskeletal pain. The Centers for Disease Control and Prevention (CDC) has defined Gulf War Illness as three symptom clusters that includes: fatigability (fatigue 24 hours or more after exertion), mood and cognition (feeling depressed, irritable, anxious, difficulty in concentrating, problems getting to sleep), and musculoskeletal (joint or muscle pain).



GWJ & Acupuncture

The complex diagnostic and treatment process of Chinese medicine, which is tailored to each individual's clinical presentation, can provide an effective framework for evaluating and addressing the complex constellation of symptoms presented in GWJ. Currently, no biomedical standard of treatment care exists. One study, completed by the *New England School of Acupuncture*, included an unblinded phase II Randomized Controlled Trial (RCT), which offered individualized acupuncture treatments, using the available community resources.

The treatment schedule duration, dose, and specific Chinese medicine techniques employed were based on the clinical experience of the expert practitioners, and informed by literature review. Details of the protocol and implementation were determined before the trial began via focus groups with senior acupuncture faculty.

Case Study Team

Licensed acupuncturists with at least five years of clinical experience, who received additional in-house training concerning GWJ, provided the acupuncture treatments. Although there are many styles of acupuncture within Chinese medicine, acupuncturists were chosen who self-reported use of the TCM model of diagnosis.

During the first session, the acupuncturists conducted an interview reviewing the subject's medical history, symptoms and aspects of diagnosis from the perspective of TCM, including condition of the tongue, pulse, meridians, and acupoints.

Each subject received an individualized diagnosis and treatment protocol addressing his or her unique pattern of symptoms. Brief interviews began each subsequent session, allowing patient and practitioner to prioritize symptoms, and identify any questions or concerns.

Individualized treatment protocols allowed the practitioners to alter the treatment plan based on how the patient presented at the moment; including varying the selection of acupoints across treatments and adding particular co-interventions commonly used as part of TCM therapy to supplement manual needling.

For example, electroacupuncture for its efficacy in reducing pain and inflammation²⁴, heat therapies (e.g. heat lamp), Chinese massage, and press balls, tacks or magnets applied to points after needling. Each session lasted approximately one hour. Acupoints were stimulated manually until "obtaining de qi," a technique characteristic of TCM to elicit a response felt by both the patient and the acupuncturist.

This needling sensation, adjusted for the comfort and safety of each patient, may be experienced as a pinch that rapidly subsides, or a sense of spreading pressure, dull ache, or warmth. Needles were retained for 30-45 min (10-35 stainless steel, disposable needles per session).

After needle insertion, subjects were left to rest or nap. The type of needle, including gauge (32-38) and length (15-50 mm) as well as the depth of insertion (subcutaneous to about 25 mm) varied according to the area of the body being treated (i.e. extremities vs. trunk). Choice of acupoints could vary during subsequent treatments to improve results. Herbs and supplements were not allowed. Subjects were encouraged (but not required) to remain with the same acupuncturist for the whole study period to allow for development of patient-practitioner rapport.³

Local advertisements and direct mailings to veterans of the first Gulf War, drawn from the Defense Manpower Data Center, recruited participants for the case study. Since the demographics of GWI veterans are unpublished, it was not known if there would be a sufficient population near the study offices to draw a fair sample. Therefore, the study was designed to include treatment sites within a 100-mile radius of the study offices, and incorporated a mechanism to add treatment sites within that radius in areas where GWI veterans were found clustered.

Thirty treatment sites were utilized. This design had the added benefit of allowing veterans to receive treatments near where they lived and worked, a technique that may have improved adherence. The resulting study provided treatments at extant acupuncturist offices to 104 veterans with GWI. The results of the study were overwhelmingly positive, achieving both clinically and statistically significant levels of improvement.

Randomized to six months of either bi-weekly acupuncture treatments or two months of waitlist followed by weekly acupuncture treatments, 82 percent of the veterans completed the protocol. Measurements were taken at baseline, two, four and six months to evaluate physical function (SF-36 physical component, SF 36P) and pain (McGill Pain scale).

Veterans who received twice per week treatments, experienced a clinically and statistically significant improvement in both pain and function at sixth month, compared to veterans receiving treatment just once per week, who also experienced a benefit in some scales such as severity of main and secondary complaint Levels of satisfaction with treatment and confidence with acupuncture and the

acupuncturist were also very high, all at least 95 percent.⁴

Please note that in 2012 Congress appropriated funds to VAs for veteran treatments received in the community. For information on how to receive reimbursement for treating veterans in your clinic, please email Lisa Conboy at: lisa_conboy@hms.harvard.edu.

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