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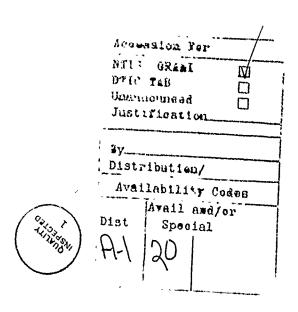Cairo, Egypt   U.S. Naval Medical Research Unit-3

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MEDICAL ASPECTS OF OPERATION DESERT STORM

To the Editor: In the Special Report by Gasser et al. concerning the threat of infectious disease associated with Americans returning from the Persian Gulf (March 21 issue),[1] a number of febrile systemic illnesses were considered. Early in Operations Desert Shield and Desert Storm, the U.S. Navy Forward Laboratory was established at a U.S. Marine Corps surgical support facility in Saudi Arabia as a theaterwide reference laboratory. The laboratory was responsible for the investigation of threats of infectious disease and biologic warfare to American forces. Samples from suspected outbreaks were forwarded to the laboratory for evaluation. Serum samples from 37 patients with febrile illness not accompanied by diarrhea were evaluated for viral and rickettsial infections. In addition to patients with fever, the laboratory studied a comparison group of 102 military personnel without fever for evidence of viral and rickettsial infections. Serum samples were tested for IgM and IgG antibodies directed against the causative agents of the diseases listed below. Procedures and reagents used for the enzyme-linked immunosorbent assays were provided by the U.S. Army Medical Research Institute of Infectious Diseases and the Naval Medical Research Institute.

No evidence of incident cases of sandfly fever, Congo-Crimean hemorrhagic fever, Rift Valley fever, Sindbis, Hantaan, dengue fever, typhus, or Q fever was found in military troops stationed in Saudi Arabia. However, one presumptive case of West Nile fever was diagnosed in a soldier with a four-day, self-limited clinical course of acute fever, debility, and arthralgia, which resulted in hospitalization. Both during the acute phase and during convalescence, the patient's serum was positive for IgM antibody against West Nile fever virus, but it did not react with the other arboviruses tested, including dengue. During the acute phase, the serum titers of IgM and IgG were 3200 and 4800, respectively. The IgG titer had doubled in the serum during convalescence, six weeks later.

It is noteworthy that sandfly fever, previously reported as an important threat in the Persian Gulf,[2] was not identified in the period from September 1990 to March 1991. This is consistent with the fact that the vector, *Phlebotomus papatasu*, was not detected during the period by military entomologists in the areas where troops were stationed in Saudi Arabia (Gale W, Claborn DM: personal communication). In addition, Congo-Crimean hemorrhagic fever, an often fatal disease found in the region, was not observed. The serologic studies performed in these patients suggest that Americans stationed in Saudi Arabia had limited exposure to arboviruses and rickettsiae known to cause infectious diseases endemic to the area.[3]