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Morbidity spectrum in the veterans

Muhammad Imran Omar

Saba Sohail

EDITORIAL

MORBIDITY SPECTRUM IN THE VETERANS

Muhammad Imran Omar* and Saba Sohail

United Nation has been deploying Pakistani and other troops in war stricken areas, particularly Central Europe, Africa and the Middle East for a long time. This physically fit, young and mobile community lives in a complex closely spaced psycho-socio-somatic environs, which makes them vulnerable to different risks. These include infectious diseases, oil well fires and hazards associated with petroleum products. Soldiers can be exposed to pesticides, insecticides, radiations, biologic weapons, chemical weapons, etc. Accidents and other sort of injury can occur. The United States department of defense has revealed that as many as 20,000 service veterans and their family members are at risk of radiation induced illness stemming from experimental treatments they received from 1940s to the 1960s.[1]

Psychological stress during war can lead to post-traumatic stress disorder (PTSD) and other psychiatric disorders. Depression and substance abuse disorder can also occur. Suicide is currently the second leading cause of death in the United States military.[2] Among the Gulf War veterans, there was a small but significant excess of deaths as compared with the veterans who did not serve in the Persian Gulf. The excess deaths were mainly caused by accidents rather than disease. Mortality due to motor vehicle accidents, suicides, and homicides was elevated, but the excess was not statistically significant.[3]

Apart from the physical and psychological trauma sustained while serving, the troops are also exposed to a myriad of infections in addition to diarrhea. These infections range from sexually transmitted infections (STIs), including life-threatening HIV and hepatitis to those caused by region specific organisms. In a study conducted by Gray *et al*, it was found that Gulf War veterans were at higher risk of neoplasm (largely benign) during 1991, diseases of the genitourinary system during 1991, diseases of the blood and blood-forming organs (mostly forms of anemia) during 1992, and mental disorders during both 1992 and 1993. The differences were not consistent over time and could be accounted for by deferred care, postwar pregnancies, and postwar stress.[4]

The prevalence of STIs in times of Civil war is directly related to disruption of social structure leading to acute famine-like conditions forcing emergence of commercial sex workers (CSWs), which serve as the largest source and reservoirs of these infections. In Nairobi, upto 88% of female CSWs were harboring HIV in the late 80's.[5] Observing Muslim religious code of conduct can provide guard against STI in general and HIV in particular even in the endemic areas where exposures can be enormous. This has been confirmed by the strict disciplinary practices among the Pakistan Army personnel. Pakistani troops that were deployed in the highly endemic region of the Africa during mid 90s remained free of the disease as against the UN officials, particularly, of African origin. The only reported case was due to breech in discipline.[6] It must, however, be kept in mind that there may be other routes of acquiring infection as seen in Malaysia, a country with strong Muslim identity and practices.[7] The prevalence of STIs is considerably high among USA soldiers. In one study, the overall prevalence of Chlamydia trachomatis infections in female military recruits was found to be 9.2 percent. The prevalence was 15 percent among the recruits from five southern states.[8]

Gulf war veterans were at slightly higher risk of getting STIs in comparison with other soldiers. Female veterans were at increased risk of infertility and inflammatory diseases of the ovary, fallopian tube, pelvic cellular tissue and peritoneum, whereas in males, there was a slightly higher incidence of redundant prepuce and phimosis.[4]

Non-STIs present a completely different scenario. The organisms are regional specific. The deployed troops are immunologically naïve becoming easily infected and serving as hosts and carriers to population back home. Exposure to well known agents such as schistosoma and leishmania in the Middle East, the onchocerca and malarial parasite in the Africa and the Trench fever in the Central Europe be anticipated and standard chemotherapy or vaccine prophylaxis administered accordingly. Of even greater epidemiological and preventive concern is the unexpected organism, e.g. the unusual visceral lieshmaniasis agent attacking the American veterans of "Operation Desert Storm" and the outbreak of furuncular myiasis in Pakistani troops in Sierra Leone, Africa. The later is presented in the current issue of JCPSP.

Myiasis is caused by the infestation of tissue with larvae. It is widespread in America and Africa and can be caused by other arthropods such as botfly, house fly, lesser house fly, and Lund's fly. The disease is most often subcutaneous and produces furunculoid or boil-like lesion. Tumbu fly usually lays its eggs on soiled blankets and clothing or in the soil. The eggs incubate and produce larvae. The patient is aware of painful creeping sub dermal sensations induce by larval migration. Myiasis caused by Tumbu fly, usually occurs on unexposed part of the body such as chest, abdomen, thigh, buttock or back. In majority of cases the disease is non fatal and ephemeral. Sun drying and/or ironing the clothes and bedding can be preventive.

New threats are being recognized with the advancement in science and technology. Nuclear weapons were used in the Second World War, but today the conventional arsenals are supplemented with biological and chemical weapons. After September 11 attack on World Trade Center, USA was gripped

*Department of Publication, CPSP, Karachi.

Department of Radiology, Dow Medical College and Civil Hospital, Karachi.

Correspondence: Dr. Muhammad Imran Omar, Assistant Editor, JCPSP, College of Physicians and Surgeons Pakistan, 7th Central Street, Phase II, DHA, Karachi-75500, Pakistan.
E-mail: drimran@yahoo.com

with the fear of a massive anthrax attack. People were afraid of opening envelops and millions of dollars were spent for their screening. Besides anthrax, several other pathogens can also be used as biological weapons such as glanders, smallpox, salmonella, measles and plague. Genetic engineering plays a pivotal role to modify the natural characteristics of organisms. Despite extreme precautionary measures taken, the microbiologists may become a victim of their own weapon. In the year 2000, a young microbiologist at U.S Army Medical Research Institute for Infectious Diseases developed glanders. Glanders is a subcutaneous infection caused by Burkholderia mallei characterized in humans by necrosis of the tracheobronchial tree, pustular skin lesions, and either a febrile pneumonia or sepsis with multiple abscesses according to the mode of entry. B. mallei was also used by Germany during the World War I.[9] Chemical weapons were used for the first time in the World War I. They have been used most recently by Iraq (1980-88) against Iran and Iraqi Kurds during the Iran-Iraq war. The agents used were the mustard and the nerve gases.[10] Many other agents are also used as chemical weapons such as blister agents and phosgene, particularly directed against the soldiers.

As the efforts of the United Nations and civilized world are directed towards maintenance of peace and tranquility in the world, there is a greater need today to devise more effective preventive measures and therapeutical means for its peace keeping soldiers, especially veterans, who are vulnerable to infections, diseases, chemical and biological weapons.

References

1. Josefson D. US admits radiation experiments on 20000 veterans. *BMJ* 1997;**215**:563-8.
2. Ritchie EC, Keppler WC, Rothberg JM. Suicidal admissions in the United States military. *Mil Med* 2003; **168**(3). Available from: URL: http://www.amsus.org/MilitaryMedicine/MMabstr.htm
3. Kang HK, Bullman TA. Mortality among U.S. veterans of the Persian Gulf War. *N Engl J Med* 1996; **335**:1498-504.
4. Gray GC, Coate BD, Anderson CM, Kang HK, Berg SW, Wignall S, *et al.* The postwar hospitalization experience of the U.S. Veterans of the Persian Gulf War. *N Engl J Med* 1996;**335**:1505-13.
5. Kreiss JK, Coombs R, Plummer F, Holmes KK, Nikora B, Cameron W, *et al.* Isolation of human immunodeficiency virus from genital ulcers in Nairobi prostitutes. *J Infect Dis* 1989;**160**(3): 380-4.
6. Tariq WUZ, Jamal S, Karamat KA. HIV and Pak army personnel. *Pak Armed Forces Med J* 2001;**51**(2):183-6.
7. Chong S. Responses to HIV/AIDS: The case of Malaysia. *J Venarol* 1995;**8**:149-52.
8. Gaydos CA, Howell MR, Pare B, Clark KL, Ellis DA, Hendrix RM, *et al.* Chlamydia trachomatis Infections in Female Military Recruits. *N Engl J Med* 1998;**339**:739-44.
9. Srinivasan A, Kraus CN, DeShazer D, Becker PM, Dick JD, Spacek L, *et al.* Glanders in a military research microbiologist. *N Engl J Med* 2001;**345**:256-8.
10. United Nations Security Council, report of the mission dispatched by the Secretary General to investigate allegations of the use of chemical weapons in the conflict between Islamic of Iran and Iraq (S/18852). New York: UN, 1987.

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