



From Gulf War Syndrome to Balkan War Syndrome

Knowing is not enough; we must apply.

Willing is not enough; we must do.

Goethe

The Gulf War Illnesses story points at a particular public health problem of our time – how to convey complicated information to the public in an acceptable and understandable way. For public health, it is of crucial importance to present and communicate the truth, which always goes hand in hand with some degree of uncertainty. The responsibility of public health professionals and other physicians is to fully and honestly present information to patients and community as a whole, although the message may not always be pleasant.

Gulf War Illnesses

Veterans of the Gulf War, which began on January 17, 1991, are military personnel who served in the war area for one or more days between August 8, 1990, and July 31, 1991 (1). According to the American Legion (2), the number of US citizens who took part in the Gulf War has been estimated at over 1 million. On the other hand, official Pentagon numbers only show a total of 696,562 US soldiers (3), but they may not include non-military members.

In March 1991, the US troops began returning from Operation Desert Storm. As early as January 1992, some veterans of 123rd Army Reserve Command in Indiana started reporting unexplained and unusual illnesses (4). Soon, media created the term *Gulf War Illnesses* for the syndrome with diverse symptoms that presented in veterans (5): chronic fatigue; skin rashes; unusual hair loss; headache; muscle pain; neurologic (numbness in the arms), neuropsychological (including memory loss) and sleep disturbances; and cardiovascular, respiratory, and mental disorders.

Intensive studies were initiated to determine whether there were some additional or unrecognized risks for the veterans who developed those unexplainable diseases, but none were found (2-15). The findings showed that those veterans were spread almost evenly throughout the Gulf War theater (2), that they were not more likely to die than their peers (6), and that there was no higher risk of birth defects among their children (7). A large study including Gulf War veterans and a control group of military personnel who did not go to Persian Gulf War (a total of 1,165,411 subjects) showed that dur-

ing the two-year period after the Persian Gulf War, there were no excess hospitalizations due to unexplained illnesses among Americans who remained on active duty after serving in that conflict (8).

Possible biological, toxic, and psychological causes were also studied (3,9-15). In December 1996, the Presidential Advisory Committee on Gulf War Veterans' Illnesses stated in their Final Report (16) that "current scientific evidence does not support a causal link between Gulf veterans' illnesses and exposures while in the Gulf region to the following environmental risk factors assessed by the Committee: pesticides, chemical and biological warfare agents, vaccines, pyridostigmine bromide, infectious diseases, depleted uranium, oil well fires and smoke, and petroleum products. Stress manifests in diverse ways, and is likely to be an important contributing factor to the broad range of physical and psychological illnesses currently being reported by Gulf War veterans."

By the year 2000, Gulf War Illnesses were considered to be "a cluster of unexplained symptoms not recognized by the medical establishment as a new syndrome or disease" (17), which "join other ambiguous conditions, such as chronic fatigue syndrome and fibromyalgia, which are controversial and frustrating to define scientifically" (18). Thus, Gulf War Illnesses followed a long-standing tradition of other unexplained post-war illnesses: nostalgia after the Civil War, shell shock after World War I, battle fatigue after World War II, and posttraumatic stress disorder (PTSD) after Vietnam War (19,20).

Public Health Dilemmas

Gulf War opened one of the most important debates on the relationship between public health, science, medicine, public opinion, media, and politics on the one hand and war and health on the other. It was a classical public health problem that brought about scientific, medical, and social dilemmas. Some people who had been in the Gulf war in the same place at the same time had symptoms that could not be readily explained. Like with all public health problems, there was a large political dimension attached to it.

Ill veterans were asked to come for a medical check-up, but even after two years of investigation there was still no single hypothesis reached that could explain

those symptoms. Largest group of patients examined had known illnesses. A small group had symptoms that did not fit into any diagnostic framework at that time. However, that phenomenon was not unique to the Gulf War Illnesses. Every day, a number of patients have symptoms that do not match any clear diagnosis (21).

So what were they ill with? Could those symptoms lead to a specific cause or causes? Was it a new disease? What type of scientific evidence is needed for medicine to recognize a set of symptoms as a new disease? What is the influence of politics, culture, and economics in that respect? It took long time for AIDS, PTSD, and spongiform encephalopathy to get acknowledged as valid disease entities (17).

If cause is to be proved, there is a responsibility to present data, evidence, and logical connection. A smaller percentage of Gulf War Illnesses might have had a specific cause, but data did not speak in favor of a single illness. There was a wide variety of symptoms and there was stress, which is strongly related to physical symptoms in general (2-4,9).

In the case of Gulf War Illnesses, public health and medical conclusions conveyed a message disagreeable to individuals and groups that were determined to find a specific illness. The media in general covered it as a political rather than a scientific or medical story. Thousands of veterans were ill, hurt, and worried about their health and future. They demanded definite, unambiguous answers to their medical problems. But, science, public health, and medicine are often unable to credibly, convincingly, simply, and directly communicate risk probabilities to people who seek nothing but positive answers.

There is also reluctance in our society to accept the psychological damage to the people who served their country in war. We do not like to admit, face, and speak openly about the consequences that an armed conflict has on body and soul of the people (22). And it always does.

Lonely Physician and Scientist

Croatian physician Dr Asaf Duraković became a well-known professor and scientist in the U.S. He was a colonel in the US Army Medical Corps and served as a commander of Medical Detachment Unit in the Gulf War (23). During the conflict in Bosnia and Herzegovina, Bosniak and Croatian physicians joined him in the action of securing a field hospital for eastern Mostar.

On the basis of his field experience, clinical examinations, and research, Dr Duraković developed the hypothesis on depleted uranium (DU) as a cause of Gulf War Syndrome (24). The position he took on the subject caused him a great deal of trouble – a case *par excellence* of what difficulties medical scientists must face in research connected with war. In the letter he wrote to President Clinton on February 11, 1997 (25), he strongly expressed the following key points: “Dear President Clinton, I am bringing to your attention the conspiracy against the veterans of the United States. In the Persian Gulf War (they) were exposed to radioactive contamination with depleted uranium. All of the records have been lost. Today I was informed in writing that my job was terminated as a reduction in force. The lost records, lost laboratory specimens, and retaliations, which are well docu-

mented, point to no less than conspiracy to terminate my efforts of proper management of Gulf War veterans... Signed: Asaf Duraković, M.D., D.V.M., M.Sc., Ph.D., F.A.C.P.; Professor of Radiology and Nuclear Medicine; Chief, Nuclear Medicine Service, VAMC Wilmington; Colonel, U.S. Army Medical Corps (R)”.

Before that letter, Dr Duraković had made a statement on DU to the Subcommittee on Human Resources and Intergovernmental Relations (US Congress) (26).

Balkan War Syndrome

In 1999, the debate on Balkan War Syndrome that included DU as a cause led Mr Steinberg, member of the British Parliament, to ask Mr Doug, US Secretary of State for Defense: “what discussions his Department has held with Dr Asaf Duraković; and if he will make a statement”. Mr Henderson answered: “Our understanding is that Dr Duraković and his colleagues plan to publish their findings later this year: hence we look forward to seeing full details of the methodology they are using and the results obtained in due course” (27).

Immediately after NATO bombed Kosovo and Serbia, concerns about possible health damages were expressed (28). “NATO is trying to save Kosovars, but if they leave Kosovo filled with depleted uranium, it’s not a happy situation. They (would be) poisoning them...”, said Dr H. Sharma (29).

Balkan War Syndrome caught full attention on April 16, 2000, when the article in the Sunday Times (30) revealed that British peace-keeping troops (10,500 soldiers) “were exposed to the fine, poisonous dust, which remains in the atmosphere and pollutes water supplies, after NATO’s bombardment” and that 12 soldiers were preparing to sue. It also pointed out that US was the only force to use DU in its missiles. Dan Fahey (30), depleted uranium researcher, said: “We know it has been used in many more locations than we have been led to believe. The biggest danger is to the local population”. On the same day, British Ministry of Defence said: “There is no evidence of any such syndrome, but if there is any, we’ll certainly investigate it... Gone are the days when such reports were overlooked” (31).

The Pentagon originally denied that uranium shells were used in Kosovo, but in March 2000, the Secretary-General of NATO, Lord Robertson, said that U.S. had used 31,000 anti-tank armor piercing projectiles.

It took 46 years for Pentagon to admit the problems caused by mustard gas, and 22 years to acknowledge the problems caused by Agent Orange in Vietnam veterans (29).

Depleted Uranium – Current issues

May 17, 2000 – Greens in German Parliament start initiative for ban of DU weapons (32).

January 1, 2001 – Italy, France, Belgium, Portugal, and Spain will review the health of the troops they sent to Balkan region to determine whether they were exposed to dangerous levels of depleted uranium. Portugal will also send a mission of experts to test radiation levels in areas where DU shells fell. Politicians in Portugal and Italy have accused NATO of a cover-up and demanded

their governments should think more carefully before joining NATO operations (32).

January 16, 2001 – Related to the public concern expressed about possible exposure of UK forces to depleted uranium, Chief Medical Officer sent a message to physicians informing them about communication with people expressing concern (33).

January 17, 2001 – By 394 to 60 votes with 106 abstentions, European Parliament called on the Member States that are also NATO members to propose a moratorium on the use of depleted uranium weapons in accordance with the precautionary principle. It is calling for a clear and transparent debate, to set up an independent European medical working party and to give priority to all measures necessary to protect public health and the environment. The long term effects on the sites which were bombed, and on the civilian population, should be evaluated. Council and Commission are urged to co-ordinate the findings of the inquiries conducted by Member States and international agencies. The Resolution calls for priority to be given in aid programmes for the Balkans to provide assistance to civilian victims and to protect the environment (32).

January 19, 2001 – World Health Organization is sending an expert mission to Kosovo to recommend measures to prevent further (if any) exposure to toxic agents, possible program and useful information to the public (34).

January 20, 2001 – Mrs Glenys Kinnock, one of Labour's MEPs, has called on the Government to suspend use of depleted uranium (DU) munitions, saying "I have no scientific background, only a gut feeling that, as a politician, I have a responsibility to try to respond" (35).

January 20, 2001 – British Medical Journal editorial states that fifty years of studies on occupational exposure to depleted uranium provides little evidence of cancer risk (36).

January 24, 2001 – Council of Europe calls for ban on depleted uranium weapons (32).

January 25, 2001 – At Iraq's request, WHO will send a team to study the health impact of depleted uranium from ammunition used during Gulf War a decade ago (32).

January 25, 2001 – The United Nations Environment Program and the International Atomic Energy Agency also said they would consider requests for fact-finding missions to Iraq, Bosnia, and Yugoslavia to study the effects of exposure to DU. Three agencies would co-ordinate their activities (32).

February 12, 2001 – British Ministry of Defence is introducing a voluntary screening program in respect to depleted uranium (32).

February 12, 2001 – International Committee of Red Cross does not support a call for the ban of DU weapons, since it has no evidence of the alleged high damages (32).

Also, International Depleted Uranium Study Team was formed with goals to stop the production and use of weapons containing depleted uranium, to conduct health studies, secure medical care for soldiers and civilians exposed, clean up contaminated sites, and totally eliminate

depleted uranium in military weapons by the year 2010 (32-37).

Reaching Croatia

Since the beginning of the war in Croatia in 1991 and war in Kosovo in 1999, many possible military uses of toxic substances with population exposure have been reported (38).

Most recently, the public anxiety was sparked when several former Croatian soldiers claimed that cancer they developed was caused by DU (39). It became a public health issue in Croatia. The Croatian Ministry of Health announced medical examination for 30 members of a mine-sweeping squad who worked in Kosovo, and National Group for the Treatment of Leukemias and Lymphomas initiated a retrospective analysis of leukemias incidence with possible changes related to war. The Institute for Medical Research stated on January 11, 2001, that there has been no changes in radioactivity anywhere in Croatia. Ministry of Defense expert team stated that they could not detect increased radioactivity at a site near the town of Slunj, where Croatian and NATO military held joint exercise. Government of the Federation of Bosnia and Herzegovina (BiH) created a National Commission to investigate Balkan War Syndrome (40). In the letter to the Dean of the Zagreb Medical School, the Commission suggested that Zagreb should cooperate with Priština, Beograd, Skopje, and Europe in formulating policy related to DU, which would include clinical care, examination, and research, respect for human rights (equity in risk assessment for all exposed populations, whether civilian or UN soldiers from poor countries, Croatian or UN soldiers from western countries), honest and complete information for the public, and creation of a standing scientific group.

War medicine had a powerful influence on Croatian medicine during the last decade of the 20th century. At the very front-line, our medicine experienced its limits and responsibilities under war conditions. In the most painful way, it has witnessed the war becoming one of the major public health risk for global community. Proposals were made on possible improvements of public health activities in prevention of war, controlling its health damages, and rehabilitation of the people and the environment (41).

Global Responsibility of Small Country

Health scares have become a defining feature of modern life, rarely absent from newspaper headlines. Public distrust of government's ability to control possible health and environmental risks and scientists' ability to assess them, indicates that current risk assessment methods need improvement, including a *precautionary principle*. Moreover, DU debate confirmed the global responsibility of medicine in a small country.

In my opinion, we should form Independent Scientific Commissions that would regularly relate to important public issues and ensure timely and valid information, respect for human rights, and international collaboration and responsibility. The Commissions should be named by the government and approved by the parliament. Their work should include goal definition, review

of existing research and knowledge (specifically in Croatia), establishing an international collaboration, media evaluation, monitoring, and consensus conferences. Their efforts should result in policy recommendations and specific information for public, professionals, risk groups, and patients.

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