Gulf War illness

Fifteen years after the first Gulf War, more than 6000 British veterans of the conflict (11% of those deployed) have developed a variety of disparate, seemingly unrelated, unexplained chronic, enduring, and sometimes disabling physical, cognitive and psychological symptoms. A similar proportion of USA service personnel have been similarly affected. Considering that most of these individuals were previously fit to be deployed on military operations it is not surprising that many have attributed their complaints to Gulf service.

Since 'Gulf War illness' came to light in 1993 controversy has raged about aetiology (and indeed the very existence of an association between Gulf service and long-term ill-health), as well as the response to the plight of affected service personnel by the UK Ministry of Defence (MoD) and USA Department of Defence (Deahl, 2005).

A single Gulf War syndrome or multiple 'illnesses'?

There is no consistent pattern of symptoms or Gulf War 'syndrome' (a term consistently rejected by the UK Government). Rather, sufferers complain of a variety of Gulf War illnesses: diverse symptoms occurring either alone or in combination. These include chronic fatigue, muscle and joint pains, respiratory, skin, and gastrointestinal abnormalities, cognitive impairment, depression and mood swings. In most cases no obvious organic cause can be identified. In a few cases where veterans have developed a demonstrable underlying pathology, the range of disorders has also been disparate with nothing obvious to link them, either pathologically or with Gulf War service.

Epidemiological studies suggesting an association between Gulf service and increased rates of myotrophic lateral sclerosis may be flawed by ascertainment bias. Claims of increased overall rate of neurological disorders (including Parkinson's disease and multiple sclerosis) have not been born out by epidemiological studies and there has certainly been no increase in overall mortality as a result of neurological disorders (MacFarlane et al, 2000).

Aetiological factors

A variety of candidate aetiological factors, acting independently or in combination, have been held responsible for Gulf War illnesses. These include multiple vaccinations administered simultaneously for disorders such as plague and anthrax (sometimes administered together with other vaccines such as pertussis to act as an adjuvant), exposure to organophosphate pesticides, prophylactic use of the nerve agent pretreatment compound pyridostigmine bromide, inhalation of depleted uranium dust, exposure to low doses of the nerve agent sarin, the destruction of chemical munitions, and exposure to the fumes of burning oil wells (Fulco et al, 2000).

Psychiatrists have noted a high incidence of affective and anxiety disorders among affected Gulf veterans, some have gone further and suggested that Gulf War illnesses are psychosomatic disorders, related to chronic fatigue syndrome (CFS) and other disorders, termed by some as 'illnesses of modernity' (Wessely, 2005). Unfortunately, the publication of two reports into Gulf War illness – a US Veterans Administration Research Advisory Committee (generally known as the Binns committee after its chair) (US Department of Veterans Affairs, 2004) and a UK inquiry, chaired by Lord Lloyd of Berwick (House of Lords Library, 2004) – has done little to clarify matters or the suspicions (of cover-up) and anger felt by many Gulf veterans who remain determined to seek redress from the UK and USA authorities.

The Binns committee (whose membership included principal researchers into the physiological effects of nerve agents) called for substantial additional funding into the effects of exposure to very low (some would argue homeopathic) dose of nerve agents, while the UK Lloyd committee focused on the issue of adequate reparation for affected service veterans. Whether substantial additional resources are likely to yield findings that materially improve health outcomes is debatable and some would argue that any further funding should be directed to tangible treatment and support that is of more immediate benefit to service veterans (Deahl, 2005).

Causation is in the eye of the beholder

Despite a considerable research effort the ill-health of so many Gulf veterans remains mysterious. Facts are few and often overshadowed by the conjecture, speculation and prejudices of experts, many with vested interests, who approach the problem from disparate biomedical and psychological backgrounds. The facts are in the eye of the beholder: science and spin easily become blurred when interpreting research findings.

One of the few widely accepted research findings to date has been epidemiological, establishing that, compared with non-deployed peers and soldiers deployed on operations elsewhere, Gulf veterans are affected by about twice the rate of unexplained somatic, psychological and cognitive symptoms, as well as an excess of seemingly unrelated chronic physical and psychological disorders (Barrett et al, 2003). There is an unequivocal Gulf War 'effect'. That, however, is where the consensus ends, the very term Gulf War illness is contested, and there is little consensus regarding the underlying cause of these symptoms and their relation to Gulf service. The similarities with CFS are striking.

All in the mind?

It is unfortunate, but sadly predictable, that the debate has allowed several unrelated issues have confused matters. For instance, the 'mind' *vs* 'body' split: Cartesian dualism with echoes reminiscent of the (equally acrimonious) debate surrounding the mysterious 1955 Royal Free Hospital epidemic when large numbers of the hospital's nursing staff were dramatically struck down by a mysterious chronic fatigue-like illness. Such was the stigma (and still is) of mental health problems that many patients preferred to believe that they were suffering from an unexplained, incurable immunological or neurological disorder with an uncertain course and prognosis, rather than a well-recognized and potentially treatable psychiatric illness. Mass hysteria or myalgic encephalomyelitis? The suggestion of 'psychiatric' disorder provoked uproar at the time and half a century later the debate remains unresolved and as contentious as ever (McEvedy and Beard, 1970).

Although enlightened thinking emphasizes the inseparability of mind and body with problems in one domain invariably affecting the other, such a view is still widely received with suspicion and hostility by many patients who perceive such an interpretation of their symptoms as an insult with connotations of malingering, or mental illness, or both.

Responsibility and risk

The debate has also raised issues of the 'duty of care' owed by the authorities towards service personnel. If the exposure to toxic hazards, vaccinations or any of the other purported aetiological agents can be linked to Gulf War illnesses (which so far they cannot), were these hazards in any way foreseeable to the authorities and could any reasonable steps be taken to minimize or prevent exposure? For example the vaccination regimen was, without doubt, unprecedented and arguably untested, however, the risk that chemical or biological weapons would be deployed by the enemy was perceived at the time as very real and denying service personnel adequate protection would, with hindsight, have been considered even more reckless.

Management

Any ex-serviceman or woman complaining of unexplained symptoms related to military service (in the Gulf or any other theatre of operations) should be assessed with an open mind and without prejudice. They may be referred to the Gulf Veterans Medical Assessment Programme based at the Baird centre, St Thomas' Hospital, London for a comprehensive assessment by military medical personnel where they will be signposted to the appropriate secondary or tertiary care services. For many, this will also be the start of a process leading to a War pension.

The treatment of Gulf War illnesses should be pragmatic, targeting symptoms (including associated psychiatric morbidity) and employing graded exercise programmes and behavioural treatment regimens to improve physical capacity – similar strategies to those used in the treatment of CFS.

Factors determining the illness behaviour of Gulf veterans remain unclear. Many ex-service personnel remain stoical and uncomplaining in the face of severe symptoms, others become totally consumed by their illness and spend their lives seeking justice, compensation and retribution. Anger directed towards the Army and MoD arising from perceived mistreatment is a factor and there are human resource issues that the armed forces must address. Regardless of any specific symptomatic treatment therapeutic success depends on establishing a trusting therapeutic relationship and helping patients put symptoms into perspective, maintaining activity levels, and focusing on their strengths.

Conclusions

Gulf War illnesses are real, but remain mysterious and their underlying aetiologies will probably remain elusive. Without doubt, war changes an individual, for many it can be a formative experience, for a few it may lead to irreparable physical or psychological damage. As increasing numbers of UK regular and reservist service personnel deploy on operations more morbidity can be expected and civilian practitioners will invariably see more service veterans presenting with long-term health problems.

Against this background, both pragmatically and morally, the health and welfare of service veterans should be of interest to us all and not remain the parochial concern of the military. The UK defence medical services (DMS) has established considerable expertise in dealing with the physical and emotional consequences of conflict; however, it lacks the necessary manpower to address the needs of veterans. Conversely, the NHS has the manpower but lacks expertise.

We should now be identifying ways of establishing links and developing networks between the NHS and DMS to disseminate evidence-based best practice throughout the health-care community, military and civilian. Servicemen and women make enormous sacrifices on our behalf, we have a moral and ethical duty to serve those who serve us and ensure that veterans have access to the best available care. BJHM

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KEY POINTS

- A Gulf War health effect has been clearly demonstrated.
- There is no single Gulf War syndrome.
- The aetiology and pathophysiology of Gulf illness remain unknown.
- Treatment should be symptom focused and based on a secure therapeutic relationship.
- Closer collaboration is needed between the NHS and the armed forces.