

War and the Medical Profession

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The relationship between the profession of arms and the profession of healing is a close one, dating from antiquity.

Among the Greek heroes who fought in the Trojan War were Podalirius and Machaon, physician sons of Aesculapius—they not only gave medical assistance but took their places in the battle line. In Homer's *Iliad*, we catch a glimpse of the worth accorded them when Machaon was wounded in his right shoulder by Paris' arrow and Idomeneus quickly ordered his removal to safety in a chariot, because

“a doctor is worth many men put together,
at extracting arrows and applying soothing ointments.”¹

Despite their contradictory ends—killing and maiming versus healing and saving of lives—war and medicine go hand in glove in history. This amiable symbiosis is not difficult to explain: nowhere else is medical aid and succour in greater demand than on the battlefield; the battlefield has, in turn, been an important training ground for medicine and surgery. Indeed, Hippocrates (460-370 BC) advised those who would become surgeons to “join an army and follow it”.²

Many illustrious names in medicine's hall of fame have taken this route: Susruta, Hua Tuo, Ambrose Pare, John Pringle, James Lind, Walter Reed, to name a few. Susruta,³ the author of India's oldest medical treatise (4 BC), devoted an entire chapter to the medical care of an army on the march; Hua Tuo⁴ (190-265 AD), China's legendary physician during the period of the Three Kingdoms served General Kwan Kung as well as his nemesis, Cao Cao. France's Ambrose Pare⁵ (1517-1590 AD) introduced many innovative surgical procedures on the battlefields of Catalonia, Flanders, and Lohringen, such as the ligature in amputations, the proper treatment of fractures and luxations, and trepanning of skull injuries; Sir John Pringle,⁶ chief medical officer of the British Army did pioneering work on typhus, dysentery and influenza (he gave the disease its name), and laid down the principles of preventive military medicine in his 1752 classic “Observations on the diseases of the army”; a year later, his counterpart in the Royal Navy, James Lind,⁷ published his landmark treatise on scurvy, advocating citrus fruits in the diet of sailors, thus paving the way for the understanding of the role of vitamins; and at the turn of the century (1901), the US Army medical team led by Walter Reed⁸ implicated the role of the mosquito in the transmission of yellow fever, leading to successful strategies for its suppression.

The nursing profession, too, had its roots in war. It was the appalling conditions encountered by Florence Nightingale in the Barracks Hospital at Scutari, Turkey, during the Crimean War in 1854 that moved her into action.⁹ Likewise, the establishment of the International Red Cross and the subsequent signing of the Geneva Conventions were the direct results of Jean Henri Dunant's shocking revelations of the carnage he witnessed at the Battle of Solferino,¹⁰ in northern Italy, in 1859. Throughout the war-ridden history of our world, the one saving grace mitigating against man's destructive impulses has been his equally instinctive response to heal and to help.

The benefits of military medicine have extended beyond warring armies to civilian populations as well. It is often under the stimulus of wartime exigency that medical advances with important peacetime civilian applications are made. The two great wars of this century, for instance, have been credited for accelerating the development of blood transfusion, treatment of burns, antibiotics, anti-tetanus toxoid, and vascular surgery, among others. The ambulance was a military invention, and so were aeromedical evacuation, chlorination of water supplies and mass immunisation. Furthermore, field sanitation measures adopted by armies against ancient scourges like typhus, plague, beriberi, yellow fever, malaria and dysentery laid the foundations for modern public health practice.

Today, military medicine is a well-established multi-discipline, its vast knowledge base touching every major branch of medical science—surgery, anaesthesiology, public health, occupational medicine, cardiology, ophthalmology, dermatology, aerospace medicine, hyperbaric medicine, psychiatry, sports medicine, pharmacology, immunology, molecular biology, and radiology, among others. Its *raison d'être* remains unchanged. Its primary focus is still the wounded soldier. Its distinctive facets include the concept of mass-casualty sorting according to priority (“triage”); the provision of casualty evacuation coupled with continuous monitoring and echeloned care from the point of wounding till definitive treatment at the rear; and a set of principles and clinical policies governing war surgery which are uniquely different from those found in civilian medical practice. Its continued development is driven by the need for resourceful medical responses to meet the constantly evolving demands of modern warfare.

It is an uphill challenge, for example, just to keep pace with the ever-advancing technology of wounding and

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maiming. In recent years, military medical researchers, in studying and raising awareness of the effects of weapons of war on humans, have been able to contribute towards international agreements limiting the use of “inhumane” weapons (e.g. the exploding bullet) that are deemed to cause superfluous injury and unnecessary suffering.¹¹ But the overwhelming reality is we live in a world awash with weapons of every type and description imaginable and, international treaties notwithstanding, must continue its search for effective countermeasures against all manner of battlefield threats-be they new or old, electromagnetic, nuclear, chemical, biological, or biotechnological.

An ethical dilemma sometimes arises from the fact that information gained from military medical research, intrinsically neutral in itself, could be used not only to improve medical care and protection but also for the development of new and harmful weapons. While medical ethics clearly dictate that he should not knowingly participate in the design of offensive weapons that increase human suffering, the military medical scientist must tread with conscience and care if he is to contribute towards the development of legitimate defensive capability without compromising his medical integrity.

Another possible source of ambivalence for the military doctor is the question of whether his primary role is to treat patients or help win the war. If the primary mission of the military medical services is to support the military mission, then its priority must be to keep the soldier fit to fight and help him triumph over his foe, rather than the mere salvage of casualties. In practice, the two roles are not in conflict but inextricably linked. Whether it is maintaining the health of soldiers, or keeping them in peak physical performance, or evacuating and treating those rendered unfit to fight, these actions all go to strengthen the hand of the commander and the fighting effectiveness of his troops. In other words, in addition to bringing to bear every modern technology at disposal to the relief of suffering and the saving of lives, the scope of military medicine properly encompasses the enhancement of physical and mental performance, and finding new ways and means of enabling troops to fight well-and win.

Military medicine is thus more than humanitarian medicine. The military doctor understands that like Podalirius and Machaon, he must take his place in the battle line. It is his sacred duty along with other citizens, to defend his country against any aggressor. Being medically competent is not enough; he must be militarily proficient. His role requires him to undergo the rigours of military training and learn how to survive in hostile operational environments. He applies his scientific mind to the study of injury patterns and illness trends, and gives advice on appropriate preventive measures-taking care to balance the often conflicting goals of maximum protection and optimal performance. Though primarily not a combatant, his contribution to victory through the reduction of casualties, the sustenance of morale, and the enhancement of combat capability, is no less important.

Above all, he must possess personal courage, for he is committed to the saving of lives even at the risk of his own. Indeed, few images are as poignant and revealing of human courage and compassion as that of a combat medical officer rendering aid to the wounded under enemy fire. In the words of Winston Churchill,

“The spectacle of a doctor in action among soldiers in equal danger, with equal courage, saving life where all others are taking it, allaying pain where all others are causing it, is one which must always seem glorious, whether to God or men.”

To be sure, there is nothing glorious or praiseworthy about war itself. But as long as war continues to be an unchanging constant in the human conundrum, and a recurring theme in human history, those of us whose dual calling is to don the helmet of Ares and wave the wand of Aesculapius, will do well to hone our skills-in the knowledge that ineluctable circumstances may one day call us to rise to medicine’s oldest, and ultimate, challenge.

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