

Futuristic Utilization of Tactical Night Vision Goggles in Darkness by Combat Medics

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Nowadays, the laws of war and rules of engagement are often disregarded by enemy combatants, and it is common to encounter practices in direct violation of these principles. To perform life-saving interventions and treatment on the battlefield, combat medics need special equipment, including light-emitting devices such as laryngoscopes and finger lights. However, the use of such devices in prehospital critical settings can potentially turn combat medics into targets for the enemy. Using this equipment in the field without taking tactical precautions can significantly increase

the risk of enemy fire for combat medics. Night-time operations have also shown that insufficient light can significantly affect the success rate of these skills and procedures. When facing limitations at night or in limited light conditions, soldiers generally resort to the tactical solution of using night vision goggles (NVG).¹ Using light-emitting devices at night-time is associated with the risk of being spotted and killed by the enemy. An Israeli physician was shot by a sniper while performing endotracheal intubation (ETI) at night.² There have been a few studies on NVG use in medical interventions, including on an ETI application with NVGs undertaken by anaesthetists¹; on emergency cricothyroidotomy with NVGs³; and on ETI and intravenous line insertion (IVI) with NVGs undertaken by emergency physicians and paramedics.⁴ However, considering the nature of military operations, it is well-known that the most frequently encountered types of injuries on the field are injuries to chest, head, abdomen and extremities. We have noted that there are currently no NVG studies on these types of battlefield injuries.⁵

There is consequently a need for NVG studies on life-saving medical procedures. At the clinics of the Gulhane Military Medical Academy Department of Emergency Medicine- Turkey, we are continuing to conduct medical studies on this subject. Our ongoing studies have revealed that combatant medical staff are able to apply chest tube and needle thoracostomy successfully by using the NVG. (Figure-1-2) Military paramedics/medics not only perform patient intervention on the field of combat, but they also have to observe their environment without taking their NVGs off during battle.

The study of Butler et al.² is a tragic illustration of the harm and damage that can be caused when an extra light source other than the NVG we recommend is used by paramedics/medics in the field of combat. Medical interventions performed with NVG in the dark should be a part of basic training provided in tactical emergency medicine.

In the future, NVG it can be expanded to other lifesaving interventions like vascular access, in the

darkness and in unsafe circumstances, and can provide safety both for the providers of first aid and for the wounded individuals. More studies can be conducted with NVG to enhance the safety of interventions undertaken in unsafe areas.

The authors state that they have no conflict of interest

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