

CASE REPORT

CDR J. D. Spencer,¹ MC, USN

Accidental Death by Light Anti-Tank Weapon: A Dangerous Autopsy?

Pathologists rarely encounter a personally dangerous autopsy. Recently, I performed an autopsy on an individual who died after being struck by a projectile that was part of a light anti-tank weapon. The projectile remained embedded in the body but did not explode. Initially, there was considerable concern that the projectile was still "live," that is, capable of exploding at any time. Special problems presented by the autopsy will be reviewed. Finally, recommendations for similar cases will be made.

Case Report

An 18-year-old Marine Corps recruit was engaged in a practice exercise on a firing range. Various weapons were being employed, including a light anti-tank weapon (M-72). At the conclusion of the exercise, a cease-fire order was given. While he was still lying prone, the decedent was struck in the head by a light anti-tank projectile accidentally fired by another recruit 20 m away. The projectile passed through the left temporal area but remained embedded in the right frontoparietal area of the head (Fig. 1). After initial resuscitation, he was transported by helicopter to a large military hospital located 60 km from the scene of the accident.

After learning that the projectile was a light anti-tank weapon, the staff of the emergency room evacuated the area except for one physician and one hospital corpsman. Vigorous resuscitation was instituted, but the injured man died a short time after admission, approximately 90 min following the accident.

He was then brought to the autopsy service where a bomb disposal expert (Explosive Ordnance Disposal) examined the projectile and determined that it was merely a practice round. Since no explosive head had been attached, it was believed to be harmless. However, examination of skull films obtained on admission revealed a radiopaque intracranial object that could not be identified (Figs. 2 and 3). This fragment was the same size as the detonator of the projectile. Attention was therefore focused on the dangerous potential

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¹Officer in charge of Autopsy Service, Department of Laboratory Medicine, Naval Regional Medical Center, San Diego, Calif.

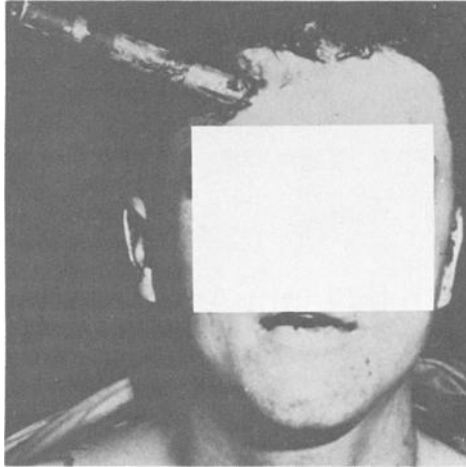


FIG. 1—*Photograph of head of victim showing the projectile extending out from the right frontal area (exit wound).*

of this object. Although the detonator would not cause a massive explosion, it could cause serious injury by flying fragments.

The postmortem examination of the head was carefully conducted the following morning. The prosector wore protective clothing including two lead-lined aprons and lead-lined gloves. A tentative attempt was made to extricate the projectile by pulling it out of

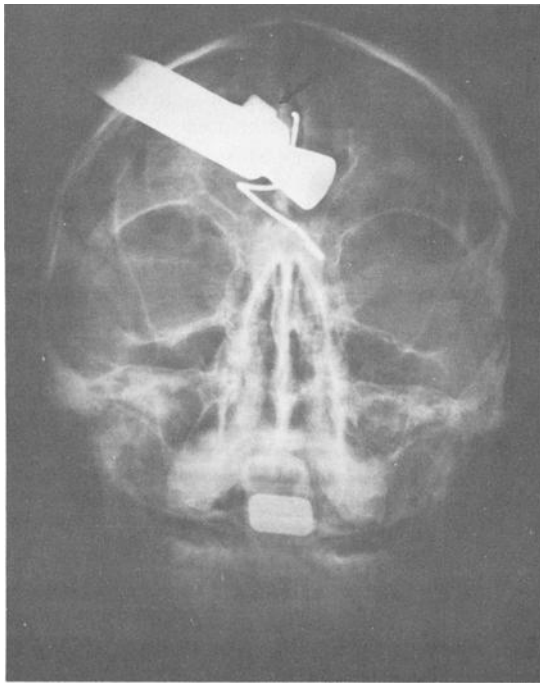


FIG. 2—*Skull film demonstrating the projectile, safety clip, and unidentified fragment (arrow).*

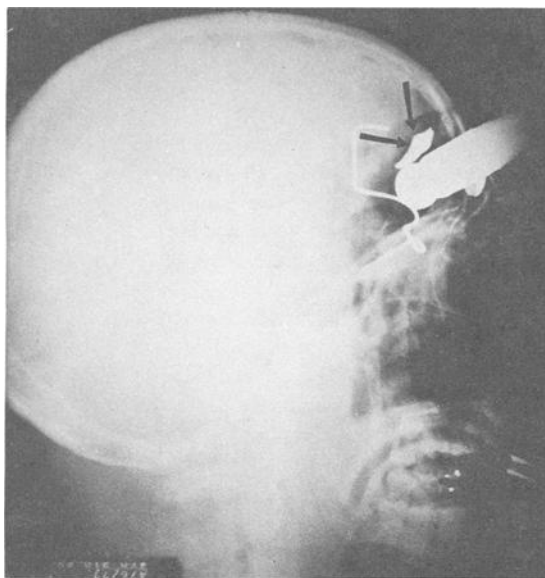


FIG. 3—Lateral skull film showing the projectile, safety clip, and unidentified fragment (arrows).

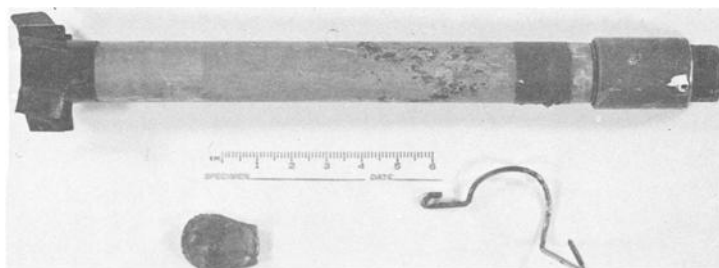


FIG. 4—Photograph of projectile, safety clip, and fragment of steel helmet removed at autopsy.

the exit wound. When this proved unsuccessful, the calvarium was opened in the usual manner by incising skin flaps and sawing the bone with a Stryker saw. The tail vanes of the projectile prevented it from passing through the exit wound.

The projectile had caused multiple basilar skull fractures, and a linear fracture connected the entrance and exit wounds. The frontal lobes of the brain were severely damaged. There was extensive hemorrhage and moderate cerebral edema. In addition to the projectile, the safety clip of the weapon and the unidentified fragment were removed (Fig. 4). The latter proved to be a piece of the recruit's steel helmet, which had not accompanied him to the hospital. The projectile had passed through the left side of his helmet. The detonator had apparently exploded on impact.

Comment

This unusual accidental death indicates the dangerous potential of certain military weapons to bystanders. This problem is not restricted to military personnel. In many areas, civilians have access to portions of military bases for recreational activities, and they may accidentally come in contact with unexploded bombs, grenades, or other ord-

nance. In addition, many areas of the country have housing developments on property that was once part of a military base. Many of these areas were used for training exercises during World War II. Unexploded weapons that could injure the curious and unwary are occasionally found.

Some recommendations can be made for cases similar to the present one. Adequate communication is very important. Initially, the weapon was thought to be capable of causing severe destruction. This apprehension could have been avoided if the hospital emergency room had been notified that the weapon was a practice round. The concern over the unidentified fragment also could have been avoided with the knowledge that the projectile had passed through the helmet.

Technical advice is also crucial in such cases. Experts with knowledge of the particular weapon type should be immediately consulted. They can furnish invaluable assistance in determining the type of weapon and danger involved. The Explosive Ordnance Disposal Unit of the closest military installation should be contacted for this assistance.

Address requests for reprints or additional information to
CDR J. D. Spencer, MC, USN
Laboratory Service
Naval Regional Medical Center
San Diego, Calif. 92134