

An unusual characteristic “flower-like” pattern: flash suppressor burns

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Abstract

The case on contact shots from firearms with a flash suppressor is rare. When a rifle fitted with a flash suppressor is fired, the emerging soot-laden gas in the barrel escapes from the slits of the flash suppressor. If the shot is contact or near contact, the flash suppressor will produce a characteristic “flower-like” pattern of seared, blackened zones around the entrance. This paper presents the injury pattern of the flash suppressor in a 29-year-old man who committed suicide with a G3 automatic infantry rifle. Hippokratia. 2012; 16 (2): 189-190

Key words: flash suppressor, contact shot, infantry rifle, suicide

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A flash suppressor is a device attached to the muzzle of modern military rifles and some civilian rifles. It is also known as a flash guard, a flash eliminator, a flash hider, or a flash cone. These devices are intended to break up a fireball that emerges from the muzzle of the rifle when fired at night. Such a device is useful in combat to decrease the possibility of counterfire^{1,2}. In this case, it is determined that the special construction of the flash suppressor results in characteristic burns and the soot deposits.

Case presentation

A 29-year-old man committed suicide by firing a rifle during his obligatory military service. He was found dead on the floor of watchtower in supine position with the body lying in a pool of blood, while keeping his guard. A G3 automatic infantry rifle was found near his body. His clothes were retained for the purpose of examination by the crime scene investigation team.

On external examination, there was a single penetrating entrance wound which was localized on the skin of his left chest. The entrance defect, sized 20 mm X 15 mm with irregular margins, was an irregular abrasion ring. Its around was blackened with soot. The peculiarity six skin lesions seared/contused with reddish-brown discoloration were accompanied around the entrance wound on the skin of his left chest (Figure1). There were not any other external traumatic lesions on his body.

Discussion

Flash suppressors are generally cylindrical structure. Its construction varies according to the manufacturers and the types of weapons. There are a certain number of lon-

gitudinal slits along its length^{1,2}. When a rifle fitted with a flash suppressor is fired, the emerging soot-laden gas in the barrel escapes from the slits. In contact or near contact shots, the flash suppressor will produce a characteristic “flower-like” pattern of seared and blackened zones around the entrance^{1,3}. If that pattern is fully formed, it may help to determine the type of the weapon. The number of “petals” of the “flower” depends on the number of weapon’s slits^{1,2}. The “flower” pattern had six “petals” in the case and was fully formed since the barrel was in



Figure 1: Flower-like burns and soot deposits on chest.

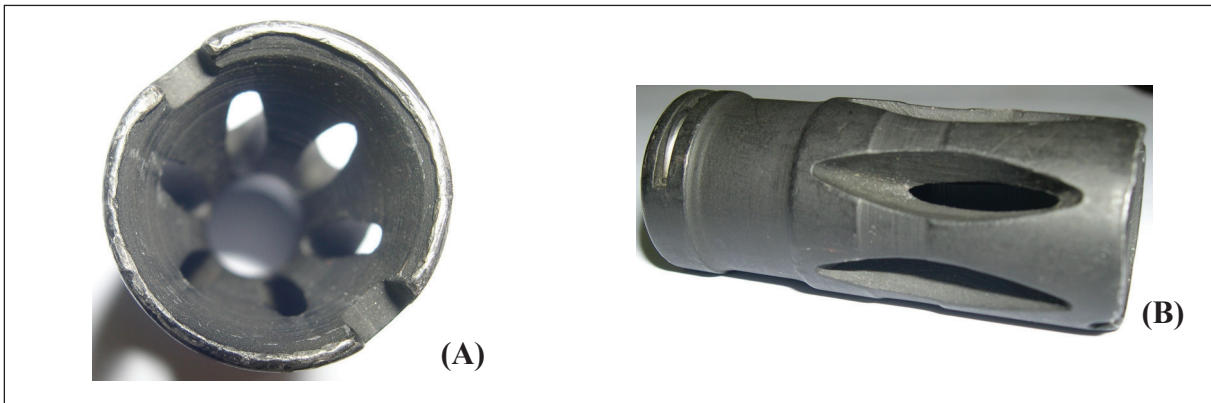


Figure 2: Flash suppressor, (A) tip of flash suppressor and (B) lateral view.

perpendicular direction to the body. Thus, it is thought that the rifle found at the scene equipped with a flash suppressor, on which there were six rotationally symmetric slits (Figure 2).

The previous studies have noticeable findings about the morphology of the entrance wound¹⁻³. As it is seen in this case, the “flower-like” pattern can be used to determine what type of weapons is used, how far the distance between the muzzle and the target is and what the direction of a barrel is.

No conflict of interest was stated.

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