Introduction

As per data of National Crime Records Bureau (NCRB), Government of India [1] there is alarming suicide figure among different professionals and various means adopted for suicide in India. The poisonings considered to be highest category and use of firearm to be lowest since such tools are not easily available to common people. But suicide by security personnel in paramilitary forces is reported due to easy availability of firearm with them. In order to reconstruct the crime, physical evidence of shooting cases are referred for forensic examination along with autopsy study of the victim to establish the crime. The determination of suicide is supported not only by the presence of close range wound but also by crime scene study, case history of the victim along with autopsy report. The complete examination of the victim may also reveal evidence of self intent on the hands of shoot deposit and blood spatter pattern. The suicides among security personnel are contributed for following reasons as reported in ‘The Times of India’ [2].

i. Stress and over work among security personnel,
ii. Poor working condition,
iii. Denial of sanction of leave,
iv. Depression after counter insurgency operation,
v. Lack of supervision and collection of intelligence from security personnel,
vi. Intoxication leading to argument and resort to violence,
vii. To take revenge on professional ground,
viii. Quick action due to availability of firearm with them.

Case Report

One rifleman working in battalion was assigned with sentry duty and all of a sudden firing sound was heard. On verification, it was found that the rifleman on sentry duty had committed suicide with his service firearm. The deceased was lying in a pool of blood along with firearm and one fired cartridge case near the body. The autopsy surgeon reported having entry wound on the back side situated in occipital bone 8 cm above cervical vertebra and exit wound over the forehead of the deceased. The observation was controversial since the presence of entry wound was at uncommon place showing absence of singeing, blackening, burning, tattooing and devoid of impression of the muzzle. In addition, it was also difficult for the shooter to fire from back side. Moreover, such type of incident has never been reported in literature in suicide cases by firearm. Further, bullet wound study along with spot analysis could confirm the entry wound to be on forehead and exit on the back. The mystery of origin of entry/exit wound could be established by wound ballistics study.

Keywords: Suicide; Bullet wound; Service firearm; Autopsy report; Wound ballistics
report, the entry wound was on the back side about 8 cm above the cervical bone and exit wound on the forehead. On close observation of the photograph of entry wound caused by contact firing, it was seen that the wound area was devoid of blackening/tattooing/charring, also the absence of muzzle impression. As such, the possibility of having entry wound on back side was remote. Further, analysis of the photograph of exit wound (as per autopsy report) it was seen that the bullet injury is devastating and could cause when firing was made at the contact of hard skull. On contact or near contact firing range, the gas/flame produced by the combustion of the propellant could produce fatal injuries more than the injury by bullet. The skull being hard could not expand due to inadequate space for expansion of gas. As a result, large quantities of gas entering into the skull rebounded back and escaped through entry wound pulling out the soft brain matter [4]. On spot analysis, it was found that one bullet mark was present on the roof of sentry post at acute angle with respect to the sitting position (cemented platform) of security personnel. The position of bullet mark/dead body just after incident was suggestive of the muzzle end of rifle in upward direction (Figures 1-5).

Figure 1: Sentry post located near international border.

Figure 2: Deceased lying in a pool of blood with service firearm and fired cartridge case.

Figure 3: Exit wound on the forehead as per autopsy report.

Figure 4: Entry wound on the back side as per autopsy report.

Figure 5: Comparison of test fired cartridge with crime cartridge case.
The other findings are mentioned below:

**Medico legal result**

Death is due to massive hemorrhage in brain due to firearm injury.

**Ballistics result**

The service firearm was recently fired as the nitrite test found positive. The recovered fired cartridge case was fired from the service firearm, confirmed through microscopic study.

**Toxicological result**

The viscera analysis ruled out the presence of common poison/alcohol (Figure 6).

**Conclusion**

On the basis of wound ballistics study and crime spot analysis, the entry wound on the forehead and exit wound in the occipital bone on the back side of the deceased have been established. The recovered fired cartridge case was fired from the service firearm used by the security personal. The analysis of viscera ruled out the possibility of poisoning and confirmed the death due to firearm injury.

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**References**

2. Rajat P (2014) 597 military personnel have committed suicide in last 5 years, government says. The Times of India, India.