



## FORENSIC INVESTIGATION OF AN AMBUSH CASE

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### ABSTRACT

Tripura is one of the north-east States of India having long international border covering 856 km and rest 162km with Mizoram and Assam. It's 3/4<sup>th</sup> area is covered with the forest. The topography of Tripura state is such that five hills/ranges run from north to south parallel to each other. Thus most of the areas covered either by hills or hill-locks with thick vegetation. The insurgents taking the advantage of such in-accessible area create subversive and anti social activities. Ambush was regular incident by the terrorist in the recent past and the situation is now under control. During the year 2002, in one case the terrorist ambushed a police vehicle in the morning carrying jawans of Tripura State Rifles (TSR). The ambush was at vulnerable point resulting the death of 20 jawans, 5 wounded and loss of fire-arms/ammunition from their possession. The paper presents a brief account of forensic investigation and the physical evidence detected has been discussed in details. The information in the paper could provide valuable intelligence input and further suggestions made will be useful for investigating agency in such type of cases.

### INTRODUCTION

The incident of ambush on security force by armed insurgent outfits in the state was a regular phenomenon in the past. The first ambush on security force was reported in 1960 by some extremist group. Since then series of ambushes have been committed by armed extremist. In the ambushes many peace loving citizen have been victim of circumstances [1, 2]. In addition many security personnel had made supreme sacrifice and quite a good number of sophisticated arms have been lost.

In absence of forensic science laboratory, the crime scene management on scientific investigation of ambush cases was not explored at desired level [3, 4]. With the availability of forensic science services in the state many ambush cases have been scientifically examined and input has been provided to the investigating officer/agency for successful investigation of such cases. The use of fire arm/grenades by terrorist is found to be very common in all ambush cases. On the basis of forensic examination of physical evidence the following information is useful to reconstruct the crime for successful investigation.

I) Type and caliber of firearms used by terrorists.

II) Number of firearms used/possible number of terrorists involved based on the examination of different fired empty cartridge cases available near ambush area.

III) Number of cartridges fired from each firearm out of total recovered.

IV) Country of origin/year of manufacture of fired cartridge cases/ammunition.

V) Type of grenade/IEDs used by the terrorist based on the examination of spot/remnants

VI) To assess the size of crater formed due to explosion and determine the type/ lethality/quantity of the explosive used.

VII) To link the fired cartridge cases/bullet with firearm used in different ambush/crime cases.

VIII) To generate data bank of fire-arm signature of fired cartridge cases/bullets for comparison with unknown recovered from insurgents and involvement of fire-arm used in other cases.

During 2002 in one morning an escort party of TSR Battalion was moving from their camp to nearby hospital for medical treatment of two sick jawans. About



twenty five police personnel were moving together in one tonner vehicle top being covered with tarpaulin partially stretched on both sides of the vehicle except the rear. The covering obstructed to view the surroundings during movement. The vehicle soon after covering some distance from the battalion when passing through the road having bamboo bush on left side, the militants taking advantage of the place and movement in one vehicle indiscriminately fired on them. The firing resulted in death of 20 jawans, 5 wounded. Further, the extremists snatched away different fire- arms/ammunition/wireless set and decamped.

The case was registered u/s 148/149/369/397 Indian Penal Code (IPC) and 25(1)(a) 27 Arms Act.

**MATERIAL AND METHODS**

The affected vehicle and the wind glass having bullet holes pattern are shown in the figures 1 and 2. The blood spatters on the body of the vehicle and the deceased jawans are shown in the figures 3 and 4 respectively. The recovered fired cartridge cases (43) and some of their firing pin marks viewed under ballistics comparison microscope (DMC, Leica, Germany) are shown in the figures 5 and 6. The fired cartridge cases have been examined and compared based on their individual and class

characteristics to ascertain the type/number of firearms used.

**RESULTS:** Soon after the ambush, the dead bodies were sent to the medico-legal department for autopsy studies. During search of the area 43 fired cartridge cases could be recovered. The seized fired cartridge cases were received for forensic ballistics examination. The findings of the examination are as follows:

- (i) On the basis of the physical examination of 43 rifle cartridge cases, 32 cartridge cases were identified as 7.62×39mm AK-47 rifle cartridge cases, 11 cartridge cases as 7.62×51mm self loading rifle (SLR) cartridge cases.
- (ii) On the basis of the factory codes present on the head stamp markings of 43 numbers rifle cartridge cases examined with the reference available in the ballistics literature, the country of origin of the fired rifle cartridge cases have been identified as follows:
- (iii) On thorough examination and inter-comparison of the class and individual characteristic marks present on 43 crime cartridge cases under comparison microscope, it was concluded that 9 firearms were used by militants to fire 43 number rifle cartridge cases

Factory codes on head stamps	Number of cartridge cases	Type of cartridge cases	Country of origin
31,61,71	28	7.62×39mm	China
539	01	7.62×39mm	Soviet Union
322	02	7.62×39mm	Romania
VPT	01	7.62×39mm	Finland
OFV	10	7.62×51mm	India
Markings in Burmese script	01	7.62×51mm	Burma

**Figure 1. The vehicle carrying TSR jawans ambushed and killed**



**Figure 2. Close up view of the bullet holes on wind glass**



**Figure 3. Streaming of mixed blood stain pattern of the ambushed jawans on the back side of the vehicle**



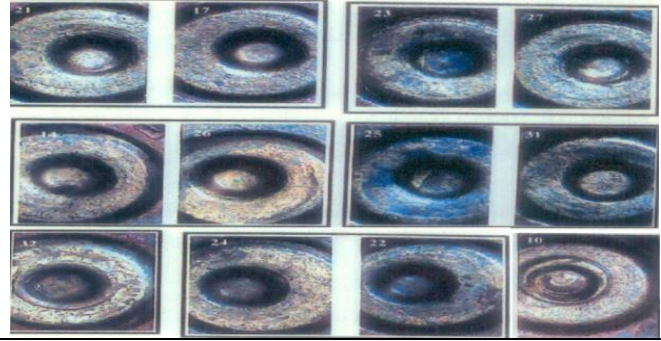
**Figure 4. “Horror of death” bodies of the TSR jawans killed in ambush**



**Figure 5. 43 fired cartridge cases recovered from the ambushed area for generating data bank of firearm signature.**



**Figure 6. Digital images of the firing pin marks of some of the cartridge cases collected from ambush area.**



**DISCUSSION AND CONCLUSION**

Re-construction of sequence of events on post analysis of ambush area:

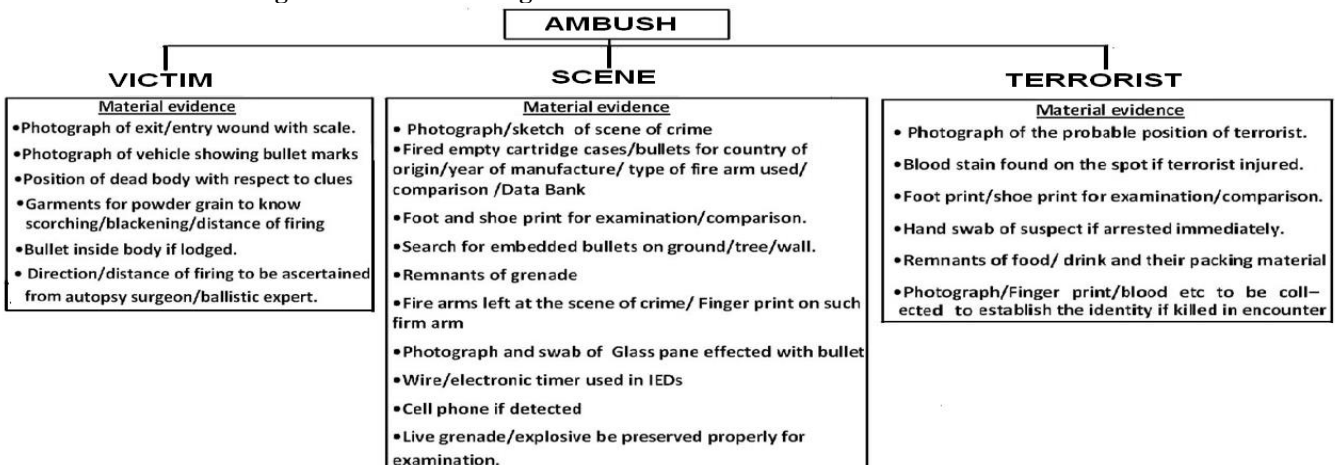
- Single vehicle carrying the jawans was in moderate speed (as observed from skid mark) on kacha (non-tar felt) road and ambushed in moving condition. The nature of skid mark on the spot suggested that the driver applied sudden break possibly hearing firing sound.
- The militants were hiding inside bush located 10 to 12 ft adjacent to the left side of the road in the direction of movement.
- The militants were more alert and had pre-plan action
- The fracture pattern on wind glass and body of the truck was possible by high velocity projectiles.
- The tyre/tube of the ambushed vehicle was found deflated with bullets to restrict movement.
- The militants used automatic weapon and completed the operation within a short time.
- 43 fired cartridges were recovered from the spot, out of which 32 from AK series and 11 from SLR.
- The shoes print found on the spot was indistinct/overlapping and devoid of patter for further examination/comparison.
- Movement of militant was by foot ascertained from topography of the area and escaped through porous international border.

- No IEDs or Grenade was used in this case
- No retaliation was made by jawans moving inside the vehicle since no fired cartridge case was available inside.

The guidelines framed for movement of paramilitary forces/civil police in insurgent prone are be followed strictly and some suggestions for preventive forensic measures be considered:

- The firearm issued to the jawans attached to sensitive post be tagged with radio frequency/electronic chips having GPS facility to help to track by means of receiver/transmitters device in case snatched away by the militants. This will also help the authority to monitor the movement of insurgents with tagged firearms.
- Similarly wireless communication be provided with tagged RFID/GPS system.
- The wrist watch of jawans posted in insurgent area be fitted with GPS showing detail information.
- CCTV system be attached secretly to the vehicle to record the ambush incident.
- Use of GPS tool and panic buttons together is a possible safeguard.

**Figure 1. Schematic diagram shown below to search clues in ambush cases:**



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### **CONFLICT OF INTEREST**

The authors declare that they have no conflict of interest.

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