FIREARM-RELATED SUICIDE IN TEHRAN:
A UNIQUE PATTERN

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All cases of fireman-related suicides from 21 March 2002 through 21 March 2003 were identified by reviewing all medico-legal files at the Legal Medicine Organization (LMO) of Iran. These data led us to make an assessment of fireman-related suicide in Tehran, the capital of Iran to establish its pattern and compare this with other studies. During the 1-year study period, 27 fireman-related suicides were identified. Twenty-two (81.5%) cases had one entrance wound. Multiple entrance wounds were seen in 18.5% of the cases. The typical sites of entrance wound were the submentum (37%), chest (25.9%), center of the face (14.8%), and forehead (11.1%). All but four wounds were caused by contact or near-contact range shots. Interestingly, 96.3% of suicides occurred at the garrisons or police station. We concluded that attention should be given to the identification of those military personnel who are at risk for suicide, i.e., the detection and treatment of their psychologic disorders.

Keywords • autopsy • firearm • Iran • suicide • Tehran

Introduction

The percentage of suicides which are due to guns varies greatly in different parts of the world, mainly due to the availability of weapons. Furthermore, a number of circumstantial factors and autopsy findings like age, gender, place of death, range of fire, type of weapon employed, number, and site of entrance wounds has been studied in firearm suicides.1–12 In Iran, there is no published study in this respect. These data led us to make an assessment of firearm-related suicide in Tehran, the capital of Iran to establish its pattern and compare this with other studies.

The Legal Medicine Organization of Iran (LMO) is responsible for postmortem examinations of all bodies believed to have died in an unnatural manner. Thus, all firearm-related suicides are transferred to the LMO. The LMO’s Forensic Medicine Specialists use the victim’s medical history, the circumstances, and environment of the fatality from the records of the police, forms of the interviews with victim’s relatives, hospital charts, autopsy findings, and laboratory data in attributing cause of death and other criteria to each case examined.

Materials and Methods

For this study, all cases of firearm-related suicides from 21 March 2002 to 21 March 2003 were identified through manual review of all medico-legal files at the LMO. In addition, records of the firearm examiners were reviewed to obtain the type of weapon used for each case. A form, consisting of variables examined was created to cover the most relevant circumstantial factors and autopsy findings. Thus, data regarding demographics, number and site of entrance wounds, range of fire, type of weapon used, and a brief account of the circumstances were recorded. The form was filled out for all cases, and descriptive statistical analysis was carried out on all firearm-related suicides.

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Results

During the 1-year study period, 27 firearm-related suicides were identified. The victims’ age ranged between 19 and 30 years (mean: 20.7 years). The median age was 20 years. The entire number of suicides was committed by men. Information on the firearm type was available in 100% of the cases. Military rifles were responsible for all but one of the cases.

Twenty-two (81.5%) cases had one entrance wound. Multiple entrance wounds were seen in 18.5% of shootings. The typical sites of entrance wound sites were the submentum (37%), chest (25.9%), center of the face (14.8%), and forehead (11.1%) but uncommon sites of entrance wound such as anterior of the chin and upper extremity were also encountered. All but four wounds were caused by contact or near-contact range shots. Notably, 96.3% of suicides occurred at the garrisons or police stations.

Discussion

There are several observations in this study that are different from other studies:

First, all victims were young. According to Karlsson,9 in firearm-related suicides the victim is often an elderly and physically, severely ill male who choose a highly effective method to end his life. Conwell2 et al stated that a greater proportion of older than younger suicide victims use a gun. Romero et al3 reported that firearm-related suicide rates are highest among the elderly. In contrast, in our study, all victims were young with a median age of 20 years.

Second, it should be noted that in this study, none of the cases of suicides were female, whereas women constituted different percentages of the firearm victims in previous studies.1, 3 – 9 This suggests that in Iran, women do not have the interest in - or fascination with – firearms that men possess and rarely have or desire access to guns.

Third, it should be noted 96.3% of the cases were by military rifles, which is different from the most studies indicating that handguns6–8 and shotguns10,11 were used in suicide. Although, Selway12 reported his results to be different from other studies, where rifles were used in 63 of 96 suicides, the observed type of weapon employed (i.e., military rifle), is the single most common firearm used has ever been reported. In Iran, both the illegal and the legal availability of firearms to the civilian population is not common, firearms are not easily accessible, and are not found in ordinary homes. However, firearms are merely available to the armed forces. Therefore, it is conceivable that firearm might only be a means of suicide amongst military personnel.

Military rifle has two firing modes, i.e., an automatic mode and a self-loading, single-shot mode. With respect to the existence of one entrance wound in 81.5% of the cases, the reason why the automatic mode is obviously avoided by the vast majority of the victims is unknown.

Fourth, previous studies reported that the overwhelming majority of suicides were committed at home or in the close vicinity of the home.1, 10 – 12 This is in strong contrast to the present study, where almost all of suicides were committed at the garrisons or police stations. Occurrence of suicides at these places may support the argument that the availability and use of firearms are associated with a significant risk of firearm-suicide.1, 2

Fifth, the entrance wound was located at the submentum in 37% of the cases. This finding in the present study is, however, different from some studies, which reported the right temple or the oral cavity as the most common sites of entrance in the head.1,6,8,12 This may be due to the fact that long-barrelled heavy weapons, such as military rifles were used in almost all cases in our series. In these circumstances, holding and shooting at the temple is not so easy. In contrast, a handgun can be held easily by the victim to shoot himself in the head, mouth, neck, and front of chest. The reason why the preference for the oral cavity was not prominent remains obscure.

All but four of the suicide cases involved contact or near-contact wounds. Similar findings were reported in previous studies.1, 4, 9

In our series, the suicide victim was often a young soldier, at either a garrison or a police station who chose an automatic military rifle with a self-loading, single-shot mode and shot at his submentum or chest to end his life. This unique pattern of suicide found in this study is different from most of the patterns reported in the literature. We believe that this pattern must be, in great part, due to the Iran’s strict gun control regulations.

Attention should be given to the identification of those military personnel who are at risk for suicide, i.e., the detection and treatment of their psychological disorders. Also, they should be encouraged to utilize health and social services.
when they have psychosocial problems or even minor psychiatric symptoms.

**References**