

TECHNICAL NOTE

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Mole Guns in Turkey in 2003–2005

ABSTRACT: This study describes the frequency of mole guns in Turkey by examining the cases sent to the Council of Forensic Medicine of Turkey between 2003 and 2005. In total, 11 mole guns were examined. Mole guns are manufactured to be used as a trap against detrimental animals. Although they are not meant to be used as a firearm, they are able to cause death. Mole guns appearing in regular casework were evaluated in terms of type of the gun, number of barrels, size and caliber, rifling, design, mechanism, fitness for use, legality, and geographical distribution. Ninety-one percent of the guns were 12 gauge. Most commonly they originate from Inner Anatolia. Mole guns are typically handmade. Some examples of injuries and deaths caused by mole guns are also offered.

KEYWORDS: forensic science, ballistics, mole guns

The variety of firearms used in violent crimes is wide. In addition to regular industrially manufactured weapons, there are varying numbers of instruments of peculiar origin and purpose, such as pen guns, mole guns, and key holder guns. These are sometimes used as lethal weapons. They are often home made (1–5).

In Turkey, mole guns are commonly used to kill detrimental animals. They sometimes cause injuries, even lethal, and are occasionally used in crime (5,6).

In this technical report, we briefly summarize the findings on mole guns from a 3-year period from 2003 to 2005.

Materials and Methods

The material for this report consists of cases sent to the Council of Forensic Medicine between 2003 and 2005. In total, 11 confiscated mole guns were examined during these years.

These guns were evaluated in respect of the type of the gun, number of barrels, size and caliber, rifling, design, mechanism, fitness for use, legality, and geographical distribution.

One of these guns is offered as a case example.

Results

The yearly number of mole guns sent to be examined ranged from two in 2005 to six in 2003. All examined mole guns consisted of just one main part. All guns had only one barrel.

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The size of the guns, measured as maximum length, varied from 20 to 40.5 cm. In terms of caliber, 10 (91%) were 12 gauge and one (9%) was 16 gauge.

A typical mole gun design is illustrated in Fig. 1. The guns are composed of just one part. Their action is based on a simple hammer mechanism: the moles, in order to get hold of food, put their head through a metal ring, which is pushed backwards, thus triggering the mechanism. The hammer strikes the primer, which ignites the gunpowder, propelling the pellets from the barrel.

A majority of seven of the 11 mole guns (64%) originated from the Inner Anatolia region, two (18%) from the Aegean region, one (9%) from the East Anatolian region, and one (9%) from the Black Sea region.

The Case

A mole gun was installed on March 10, 2004, in a farm in order to kill detrimental animals that damaged potato plants. Two days later, while children were playing in the field an explosion was heard. A 4-year-old child was found lying down, bleeding and motionless. In a further investigation, an entrance hole, 3 cm in diameter was found on the front side of the child's pullover, shirt, and undershirt. The hole on the pullover and its surroundings were scorched and burned. The sodium rhodizonate test was applied on the clothes and visualized patterns of vaporized metal deposits were obtained on the filter paper, but not on swabs taken from the child's hands. The mole gun (Fig. 2) consists of a barrel 15.7 cm long and 2.5 cm in diameter pinned on a piece of board (32 × 8.1 × 4.5 cm) with a nail, and a mechanism to fire shotgun pellets that have been placed in the barrel.

At autopsy, two pellets were found in the body. An atypical entry wound of 1 × 2 cm formed by the discharged shot pellets at 2 cm above the umbilicus was observed, with gunpowder traces in the shape of a crescent inside part of the wound. A shotgun wadding was found within intestines, and injuries were observed in the stomach, intestines, liver, lungs, and heart, caused by multiple shotgun pellets. There were c. 1.5 L of blood both in the chest

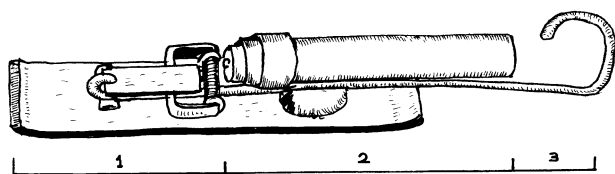


FIG. 1—Construction of a mole gun. 1, trigger mechanism; 2, barrel; 3, a metal ring where the rodent puts its head when reaching for food.

cavity and abdomen cavity. The cause of the child's death was defined as massive injuries of internal organs and bleeding.

Based on witness testimonies, site investigation, the features of the gunshot residues, estimation of shooting distance, examination of clothes, and autopsy findings, it was concluded that the death of the child was caused by an accidental close-range shot resulting from the child's own actions.

Discussion

In addition to industrially manufactured guns, a firearm examiner occasionally encounters various handmade guns. Even mobile phone, credit card, cigar lighter, key ring, etc., guns have been produced (7).

Mole guns are commonly used to protect vegetable and fruit growth from detrimental animals in rural areas in Turkey. People migrating from rural to urban areas may use mole guns as a familiar means for another purpose: to protect their property from theft. Primitive weapons such as zulu-zip guns, similar to mole guns found in Turkey, have been reported to be common in Zululand, South Africa (1).

In Turkey, the legality criteria of guns are given in Act 6136, which defines fitness for use and bullet caliber and type. Although mole guns are manufactured to be used as traps against detrimental animals and they are, strictly speaking, not designed to be used as firearms, qualified opinions of experts have categorized these devices as prohibited firearms.



FIG. 2—A mole gun with its trigger mechanism. The upper one is ready to fire, and the bottom one is fired.

Other Case Examples

In a larceny case, a mole gun was used as a trap against burglars in an apartment. A witness described that the uninhabited apartment of the claimant had been repeatedly robbed by intruders, by breaking the windows and the door lock. The installed mole gun later injured a burglar on the right arm. The man jumped off the balcony and went to the nearest hospital. The medical record of the state hospital records an entrance mark (2×2 cm) on the right arm, region antebrachialis anterior. Gunpowder marks were found on the arm and on the hand, palma manus. The report concludes a loss of dorsoflexion at the wrist (5).

In an accident case, a man (51 years) setup a mole gun mechanism in a potato field. As the gun did not work as planned, he removed the mole gun from its fitting 2 days later. While he was carrying it in the left hand, it suddenly went off and wounded his left eye and head. After 3 days of medical treatment, he died at the hospital (6).

A 78-year-old man had received psychological treatment occasionally for 15 years and had once attempted suicide with poison. Two days after having been discharged from a psychiatry department, he placed a mole gun, available in his house, vertically against his head, fired it, and died instantly (6).

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