

SUICIDE BY ELECTROCUTION (A RARE PHENOMENON)

K.A.S. KODIKARA

*Department of Forensic Medicine Faculty of Medicine
University of Peradeniya*

Sri Lanka has one of the highest rates of suicide in the world and the commonest mode of suicide is ingestion of liquid pesticides. The analysis of medical literature confirms the rarity of suicide by electrocution. So far, only one case has been documented in Sri Lanka in this respect. This communication attempts to report a rare case of death due to suicidal electrocution. A 40-year-old farmer was found dead inside his vegetable plot clutching a non-insulated wire. Interviews by police revealed that the deceased was in a habit of erecting unauthorized electrified fences using non-insulated wires to protect his cultivation from wild animals. He was in a depressed mood for several days because of a dispute with a neighbour.

At autopsy, there were areas of electric burn on right wrist, right index, middle, and ring fingers and right anterior surface of the chest. There was blackening due to carbonization and areas where the skin had blistered and was hyperaemic. There were no identifiable exit marks at the sites where the current passed to earth. On examination of clothes, a suicide note was recovered from the pocket of his underwear, stating that he was committing suicide. The wife recognized the handwriting of the note as of him. Internal findings at autopsy included multiple subepicardial petechiae, congested lungs, liver and kidneys. There were no other significant findings in other organs macroscopically or microscopically. Microscopic examination of the electric burns revealed streaming of the epidermal nuclei, microscopic bullae in the epidermis and thermal coagulation artifact. Current passing across the chest is most dangerous to life. This path puts the heart in line with the current. Cardiac myocytes are particularly sensitive to 60 Hz current. Current fluctuations at this frequency tend to induce ventricular fibrillation. Ventricular fibrillation produces little or no cardiac output and therefore leads to systemic hypoxia and death within minutes.

In this case, the current could have passed from right upper limb, through the heart to the ground at the feet causing ventricular fibrillation and cardiac arrest. The few positive autopsy findings seen in this case were consistent with ventricular fibrillation, which is the commonest mode of death in electrocution.

The cause and the circumstance of this death were concluded as electrocution and suicide respectively. The deceased, most probably selected a rare method of committing suicide because of his familiarity with electricity.