A retrospective study of clinico-epidemiological profile of snakebite related deaths at a Tertiary care hospital in Midnapore, West Bengal, India

Kripasindhu Gantai
Midnapore Medical College, India

Objective: Snakebite is one of the neglected tropical diseases that World Health Organization (WHO) aimed to eradicate. The objective of the study is to investigate the mortality and morbidity due to snakebite at Midnapore Medical College & Hospital in Paschim Medinipur district, West Bengal, India.

Methods & materials: This is a record-based, retrospective, descriptive epidemiological study conducted from January 2012 to December 2016 at Midnapore Medical College and Hospital (MMCH), Paschim Medinipur district, West Bengal. The incidence and determinants of snakebite related mortality with reference to types of envenomation, age, sex, site of bite, clinical manifestations of snakebite, bite to hospital and bite to AVS treatment time, first aid and management of snakebite were investigated during the study. The data was analyzed by SPSS (Version 18) software. All results were expressed as percentage.

Results: Total number of snakebite deaths in Midnapore Medical College and Hospital (MMCH) was 222 from the period 2012–2016. Number of males was 134 (60.36%) and female 88 (39.63%). Maximum snakebite deaths occurred in the age group of 31–40 years during agricultural and outdoor activities. Most of the snakebites occurred during June-September. Out of the 222 cases of snakebite, 182 (82%) cases were due to viper envenomation. Maximum number of cases (n = 162) were detected in the interval between 4.00 PM to 8.00 PM. The bite to hospital time was found to be 180 ± 3.5 mins (n = 190 cases) and bite to AVS injection time was found to be 240 ± 3.5 mins (n = 190 cases). The mean bleeding time was 12.55 ± 3.2 min (n = 190 cases). The mean clotting time was found to be 20.1 ± 2.55 min (n = 190 cases). The symptoms of envenomation included local signs of inflammation (100% cases), blisters and necrosis (45% cases), renal failure (20% cases), coagulopathies (57% cases), ptosis (10% cases), dysphagia (2%) and respiratory distress (15% cases). The WHO protocol for snakebite management was followed for treatment of snakebite victims.

Conclusion: Snake bite is a neglected, life-threatening emergency in developing countries such as India and demands immediate anti-venom therapy. Hospital studies are a key source of information about snake bites. The ready availability and appropriate use of AVS, close monitoring of patients, the institution of ventilator support and if required, early referral to a larger hospital all help to reduce the mortality. Thus knowledge of the varied clinical manifestations of snake bite is important for effective management in hospitals by a complete health care team.