

COAGULOPATHIC DISORDERS FOLLOWING SNAKEBITE: A 5-YEAR STUDY OF 108 PATIENTS IN KHORASAN REGION

B Dadpour, SM Monzavi, R Afshari

Mashhad University of Medical Sciences (MUMS), Medical Toxicology Centre (MTC), Iran

Background and objectives: Coagulopathy is a serious complication of snakebite exclusively in viper envenomation. This study was to determine the frequency of coagulopathic disorders among snake-bitten patients in Khorasan region. **Methods:** In this retrospective study, medical records of patients admitted for snakebite at Medical Toxicology Centre (MTC) between 2007 and 2011 were reviewed. Patients who had haemorrhage (local, epistaxis, haematuria, systemic) or experienced thrombocytopenia ($\text{Plt} < 150 \times 10^3/\text{L}$) or venom induced consumptive coagulopathy (VICC defined as $\text{INR} > 2.0$ and/or $\text{PT} > 24\text{s}$) were included.

Results: Of 108 patients 77.8% were male, and the mean age was 34.0 ± 26.3 . Median [range] of baseline laboratory studies including PT, aPTT, INR and Platelet count were 13.0 [12-125], 28.0 [20-61], 1.1 [0.8-3.90] and 186.0×10^3 [$65.0-440.0 \times 10^3$] respectively. Four patients (3.7%) had epistaxis and 2 had haematuria (1.9%). Thrombocytopenia was seen in 25 (23.1%) patients, VICC in 2 (1.9%) and both thrombocytopenia and VICC in 2 (1.9%). No patients experienced thrombotic events. In overall, 29 patients (26.9%) had coagulopathic disorders.

Discussion: In this study we found that coagulopathic disorders occurred in a considerable number of snake-bitten patients (one of four). Thrombocytopenia was the major problem which is known to be caused either by (1) destruction of platelet precursors or (2) aggregation/peripheral sequestration of platelets at the wound site. Both mechanisms can be caused by toxins in venom of *Echis* spp., the dominant species in Khorasan region. However, these disorders may not be present in the first hours after the bite. Hence they might be neglected and in some conditions catastrophic bleeding may occur. Since it is known that envenomation is a dynamic process, sequential monitoring of main lab test (CBC, PT, aPTT and INR every 3 hours until the patient is become stable) and completing the haematologic charts are essential.