HEMATOLOGICAL DISTURBANCES INDUCED BY BOTHROPS VENOM


Local and systemic disturbances are usually observed in patients bitten by Bothrops snakes. The most common systemic disturbance is blood incoagulability occurring more frequently in patients who were bitten by young snakes. This incoagulability is attributed mainly to fibrinogen consumption induced by thrombin-like fractions. In addition to these fractions some Bothrops venoms may activate factor X and II causing formation of intravascular thrombin. This is confirmed by the presence of cross-linked fibrin fragment D in blood from patients. Besides, the intravascular coagulation causes an activation of the fibrinolytic system. Moreover, a mild thrombocytopenia is observed which may be induced either by the activated coagulation system or by components from Bothrops venom acting on platelets such as botocetin, which has agglutinating activity and thrombocytin which has aggregating activity. The role of all these fractions in envenomations is still uncertain, although the in vitro activities are well studied.

In addition to the action on hemostasis most of these venoms possess an in vitro hemolytic activity. However, there are no descriptions of serious intravascular hemolysis in patients. The action of these venoms on other blood cells seems to be unspecific. In conclusion, the most specific and apparent hematological disturbance in Bothrops envenomations is the blood incoagulability and thrombocytopenia.

REFERENCES