Hemostasis property of Malian herbal plant used to manage bleeding event

Introduction: Bleeding diseases management is a big challenge in developing countries where diagnosis and drug access are not easy. In Mali 80-90% of the population frequently used medicinal plant with a good response. Unfortunately, knowledge on these plants is undocumented. Here, we investigated ten herbal plants currently used by traditional practitioners in Dioila district (Mali) to treat bleeding conditions. The aim of this study was to investigate the coagulation properties of these plants and identified the substance responsible for different hemostasis properties.

Materials & Methods: The hemostasis properties of water, ethanol and dichloromethane extracts from ten plants have been investigated. The plants were selected after ethnobotanical survey conducted in Dioila area in Mali. Fifteen traditional practitioners were interviewed in the survey and the ten plants currently used according to their high level of fidelity were retained for this study. The effect of the extracts on hemostasis parameters was investigated using whole blood from healthy donor. All extracts were incubated with whole blood at the final concentration of 0.25 g/L. Activating platelet time aPTT and thrombin time were measured using coagulation automate (STA satellite®) at 0 and 30 min after incubation. Buffer was used as a control in the same condition. Results were expressed as ratio for aPTT and percentage for Thrombin time. All tests were performed in double.

Results: We have investigated the effect of twelve extracts from ten plants on aPTT and thrombin time at (0 and 30 min) after incubation. aPTT measurement directly after incubation showed that eleven extracts gave a result lower than 1.2. Only extracts from Pteleopsis myrtifolia bark and trunk, induced an aPTT beyond 1.2. After 30 min incubation, aPTT value from all extracts was lower than 1.2. In contrast, it seems that prothrombin time was not strongly modified by any extract.

Conclusion: Some extracts from herbal plants modified aPPT which could be associated to a hemostatic effect. More investigations are needed in order to confirm these findings.

Biography
Diallo Yacouba L successively achieved his Medical study degree in 2000, the Hematology Special Training in Ivory Coast in 2008, Clinical Hemostasis and Thrombosis Interuniversity Diploma in Lyon in 2009 and a Master’s degree in Vessel Biology, Physiology and Pathology from Paris University, France in 2010. His research interest topic is hemostasis, especially in bleeding disease such us hemophilia. Due to the poor financial condition of the population in his country, he is keenly interested to improve bleeding diseases treatment with medicinal plants. He is a member of many national and international scientist societies of Hematology and Hemostasis.