Assessment of Phytochemical and Thrombolytic Activity of Curcuma longa, Moringaoleifera, Cinnamomum verumand Allium sativum: A comparative study

Akhangsha Paul[1], Priyashi Purkayastha[2], Aakansa Acharya[2], Sayantika Poddar[2] and Samhita Bhaumik[2]*

[1] Department of Chemistry, ICFAI University

[2] Department of Chemistry, Women's College, Agartala

ABSTRACT

Objective:The present study aims to compare the thrombolytic activity of aqueous solution of some locally available spices and vegetables of our daily diet.

Materials and Methods:Curcuma longarhizome, Moringa oleiferaleaf, Cinnamomum verumbark and Allium sativumbulbwere collected, dried in shed, powdered and aqueous solution were prepared by soaking them for overnight.The phytochemical assessment of these plants was performed by using the standard method. The thrombolytic activity was evaluated by in vitro clot lysis procedure.

Results: In the present study, aqueous extract of Curcuma longarhizome, Moringa oleiferaleaf, Cinnamomum verumbark and Allium sativumbulbwere used. These extracts produced considerable clot lysis of goat blood, showed significant result in a concentration dependent manner. In the present study, Streptokinase was used as a positive control. The goat blood was taken as test sample. The mean % of clot lysis for streptokinase was 31.086%. Similarly, the aqueous extracts of the Curcuma longa, Moringa oleifera, Cinnamomum verum and Allium sativum showed the maximum percentage of clot lysis as 6.59%, 10%, 39.109% and 26.035% respectively.

Conclusion:The aqueous extract of Curcuma longarhizome, Moringa oleiferaleaf, Cinnamomum verumbark and Allium sativumbulbhave potential thrombolytic activity.The edible plant's observed thrombolytic potential may be employed to prevent coronary artery disease, stroke, transient ischaemic attack, and peripheral arterial disease. Further in-

vestigations are required to isolate the bioactive molecule responsible for the thrombolytic action.

Keywords: Aqueous extract, Curcuma longa, Moringa oleifera, Cinnamomum verum, Allium sativum, control streptokinase, thrombolytic activity.