Hemorheological changes, one of the causes of abnormal uterine bleeding from the perspective of traditional Persian medicine

Golamreza Salsali\textsuperscript{a}, Sayed Saeed Esmaeili Saber\textsuperscript{a}, Fatemeh Emadi\textsuperscript{a,b}, Mohammad Gholami Fesharaki\textsuperscript{c}, Fatemeh Nojavan\textsuperscript{d,e}, Atieh Sadat Danesh\textsuperscript{d}, Seyed Abbas Hasheminejad\textsuperscript{a}, Nafise Zafarghandi\textsuperscript{f}\textsuperscript{*}

\textsuperscript{a}Department of Traditional Iranian Medicine, Faculty of Medicine, Shahed University, Tehran, Iran
\textsuperscript{b}Traditional Medicine Clinical Trial Research Center, Shahed University, Tehran, Iran
\textsuperscript{c}Department of Biostatistics, Faculty of Medical Sciences, Tarbiat Modarres University, Tehran, Iran
\textsuperscript{d}Department of Traditional Iranian Medicine, Faculty of Traditional Medicine, Qom University of Medical Sciences, Qom, Iran
\textsuperscript{e}Health and Spiritual research center, Qom University of Medical Sciences, Qom, Iran
\textsuperscript{f}Department of Obstetrics and Gynecology, Faculty of Medicine, Shahed University, Tehran, Iran

Abstract:

Background and Purpose: Abnormal uterine bleeding is one of the common causes of referral to treatment centers at pre-menopausal age. Persian comprehensive medicine expresses several causes for this problem. These causes can be divided into two general categories of uterine causes and blood causes. Blood causes include changes in the quality and quantity of blood that may change blood fluidity. The purpose of this article is to investigate the blood-induced changes in uterine bleeding from the viewpoint of Persian medicine and its explanation based on the fluid mechanics.

Methods and Materials: First, the causes of abnormal uterine bleeding were studied by searching the reference books of traditional Persian medicine. Since a series of these causes have focused on changes in the blood flow, in order to study the blood flow behavior, the keywords of “Rheology”, “Hemorheology” and “Blood rheology” were searched on relevant scientific sources. Then the relationship between blood flow and abnormal uterine bleeding was explained.

Results: From the perspective of Persian medicine, one of the causes of uterine bleeding is a change in the quality of blood as a result of its heat increase or an increase in the percentage of water relative to its other components, or a change in the amount of blood. Based on the science of fluid mechanics, these changes increase the fluidity of the blood.

Conclusion: Understanding the mechanism of blood changes and its relationship with abnormal uterine bleeding will open new horizons in preventing and treating this problem.

Keywords: Abnormal Uterine Bleeding, Rheology, Hemorheology, Traditional Persian Medicine

Corresponding Author: nafis_zafar@ymail.com