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Is It Rational to Study Coagulations Test Routinely before Operations and Invasive Procedure: Single Center Retrospective Study

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Dear Editor,

I read with interest the recent paper by Fergün Yilmaz and et al. entitled: "Is It Rational to Study Coagulations Test Routinely before Operations and Invasive Procedure: Single Center Retrospective Study" that has been published in the recent issue of International Journal of Hematology-Oncology and Stem Cell Research¹. The function of the hemostasis system to prevent bleeding episodes is the result of collaboration and crosstalk between blood vessels, blood cells, coagulation factors and fibrinolysis system. Hence, the detection of aberrations involved in this complex system of hemostasis is cumbersome, complicated and expensive². Indeed, at present time we do not know a single test who can check all these four systems altogether.

Recently, we retrospectively reviewed causes of death among patients with hemophilia in our region³. In that survey, there were cases who had died or encounter serious problems after circumcision or other surgeries. Since there is no complete screening test that can be substituted for PT and APTT to detect hemorrhagic tendency, it seems that they are only available usable

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methods for detection of bleeding disorder, especially in developing countries, where there are restricted diagnostic facilities. Anyway, these tests would not be ordered as screening test to predict bleeding tendency⁴. The necessity of performance of screening tests of hemostasis system before surgical procedures has remained a challengeable issue among hematologists and surgeons yet.

Although family and personal history are the first steps of selection coagulation tests, it should be kept in mind that 1/3 of cases with hemophilia are de novo and without any familiar history of bleeding history in family⁵. Moreover, cases with a diagnosis of acquired hemophilia and other bleeding disorders have not only negative family history but also a negative personal history of bleeding before their recent hemorrhagic episode that terminated to the diagnosis of acquired bleeding⁶.

The authors have concluded in abstract that they did not find any statistically significant difference regarding bleeding among two groups with high PT and PTT and low PT and PTT. This comparison has a significant bias as a number of patients (n=38, 67.8%) cancelled their surgeries and some others were not operated.

The new version of hemostasis assays including, Thrombin generation test, Thromboelastography, etc. is better indicator of any abnormalities in the hemostasis cascade². It takes time till the current diagnostic facilities to be available in developing countries, where there are a noticeable number of patients with bleeding disorders. At the present time, it seems that it would be rational to carry out the current screening tests of hemostasis, especially in the two groups: 1) Adults with no clear history of hemorrhagic events regarding as a challenge for the hemostasis system (minor or major surgery) in themselves or in first-degree members of their families; 2) All children without a history of any previous invasive procedure that may be associated with bleeding risk.

CONFLICT OF INTERESTS

The author declare no conflicts of interest.

REFERENCES

1. Yılmaz F, Karslı T, Kiper D, et al. Is It Rational to Study Coagulations Test Routinely before Operations and Invasive Procedure: Single Center Retrospective Study. Int J Hematol Oncol Stem Cell Res.2019; 13(3): 140-5.

2. van Geffen M, van Heerde WL. Global haemostasis assays, from bench to bedside. Thromb Res. 2012; 129(6):681-7.

3. Mansouritorghabeh H, Rahimi H, Mohades ST, et al. Causes of death among 379 patients with hemophilia: a developing country's report. Clin Appl Thromb Hemost. 2018; 24(4):612-617.

4. Capoor MN, Stonemetz JL, Baird JC, et al. Prothrombin time and activated partial thromboplastin time testing: a comparative effectiveness study in a million-patient sample. PLoS One. 2015; 10(8):e0133317.

5. Mansouritorghabeh H. Clinical and laboratory approaches to hemophilia A. Iran J Med Sci. 2015; 40(3): 194–205.

6. Tabriznia-Tabrizi S, Gholampour M, Mansouritorghabeh H. A close insight to factor VIII inhibitor in the congenital hemophilia A. Expert Rev Hematol. 2016; 9(9):903-13.