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Letter to the Editor

Comment on: "Efficacy of preoperative administration of single high dose intravenous tranexamic acid in reducing blood loss in total knee arthroplasty: A prospective clinical study"

Dear Editor,

With great pleasure we read the "Efficacy of preoperative administration of single high dose intravenous tranexamic acid in reducing blood loss in total knee arthroplasty: A prospective clinical study" article published in the 50th edition of your 2016 issue.[1] We also have experience using tranexamic acid (TA) as a blood saving agent in major Orthopedic surgeries. Literature reviews show statistically significant decrease in blood loss as well as erythrocyte suspension transfusion rates with the use of TA.[2,3]

There are two main methods to evaluate blood loss during knee arthroplasty, with tourniquet application. The first method is decrease in Hemoglobin (Hg)-Hematocrit (Htc) levels, and the second is to determine the amount of fluid collected from postoperative drainage. For non-tourniquet surgeries, the amount of fluid collected from intra-operative aspirators and the weight of bloody gauzes are also calculated.[4]

The paper mentioned above, clearly emphasizes the amount of blood loss calculated intra-operatively by aspirators and post-operative drained fluid. However, post-operative Hgb-Hct level assessment was not mentioned. If the amount of fluid collected from the drain of the control group is significantly higher than the treatment group; This means blood loss is higher in control group. So, a significant difference between groups according to Hgb-Htc studies should be expected. However, no such declarations about post-operative differences between the groups were made in the result of the study. It is important to note incompatible results can be misleading. Similar hemoglobin levels may be due to early postoperative blood transfusions in the control group. In that case, the exact time of blood transfusions to the control group has be discussed in the article.

We aimed to emphasize the possible misunderstanding from this paper as no significant difference in post-operative mean Hgb-Htc levels of both groups.

Respectfully,

Budak Akman*, Uğur Şaylı, Melih Güven, Faik Altıntaş
Yeditepe University Faculty of Medicine, Orthopedics and Traumatology Department, Istanbul, Turkey

* Corresponding author. Tel.: +0 216 578 40 44/+0 532 485 58 77.
E-mail addresses: drbudakakman@hotmail.com (B. Akman), ugursayli@gmail.com (U. Şaylı), maguven2000@hmail.com (M. Güven), faltintas@superonline.com (F. Altıntaş).

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Author's Response:

Dear Editor,

We thank the authors for their interest in our paper. However, if the authors had analyzed our patients and methods section they should have seen that we deliberately did not used hemoglobin levels to evaluate possible blood loss. We used hemoglobin levels preoperatively and postoperatively (at 48 h) only for patient safety and for no other reason. All of our anemic patients were transfused when necessary during the postoperative period, as mentioned in the patients and methods section; thus, it would be abnormal if transfused patients had different results at 48 h. We did not use hemoglobin levels for the evaluation of blood loss, as it is well known that hemoglobin levels are prone to errors and variability depending on factors such as patient physiology, sample source (arterial, venous or capillary), body position (standing, sitting, supine), time of sample collection (diurnal variations), usage of tourniquet (more than 30 s increases hemoglobin), sample handling, and measurement methodology.[1] Additionally, we think that clinicians should be cautious when assessing hemoglobin data, as hemoconcentration associated with slow vascular loss, or hemodilution

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associated with applied intravenous fluids, may influence the effectiveness of using hemoglobin levels.[2]

Turgut Akgul[a], Ipek S. Edipoglu[b], Mehmet I. Buget[b]
[a] *Istanbul University, Istanbul Faculty of Medicine, Department of Orthopaedics and Traumatology, Turkey*
[b] *Istanbul University, Istanbul Faculty of Medicine, Department of Anaesthesiology, Turkey*

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