Tranexamic acid for control of blood loss in bilateral total knee replacement in a single stage

Sir,
We read the article, “Tranexamic acid (TEA) for control of blood loss in bilateral total knee replacement in a single stage” by Dhillon et al.,1 with interest. We congratulate the authors for their excellent study as scarce data is available on the use of TEA in simultaneous bilateral TKA.

In this study, TEA administration was started just a few minutes before tourniquet release on the first knee operated, which conflicts with the conclusions from older studies such as Cochrane Review by Henry et al.,2 which concluded that TEA should be administered at the beginning of surgery in order to be effective.

The authors have mentioned that the patients with allergy to TEA were excluded from the study. Whether an allergy test was performed in all patients planned for intraoperative TEA use in their study? Were there any patients in the study who were found allergic to TEA? Authors also have failed to inform the readers of the usage of any screening tool to identify the high-risk patients for venous thromboembolism.

Authors have also mentioned that adequate homeostasis was maintained before closure of the wound. However, there is no clarity as to whether the tourniquet was deflated before the closure, in which case there is an intraoperative blood loss. If the tourniquet is not released, the intraoperative blood loss can be considered negligible. Though authors have mentioned that no attempt was made to measure the intraoperative blood loss, they have also mentioned the drop in hemoglobin level, which indirectly reflects the importance of the total blood loss.

It is indeed surprising that the authors have mentioned the preoperative hemoglobin as 12.78 ± 1.85 g/dl in TEA group and 13.04 ± 1.72 in the control group. It is also our experience in this subcontinent to find patients with low hemoglobin, i.e. less than 10 g/dl, who are asymptomatic and well compensated. Is the indication for one-stage bilateral TKA in anemic patients with a preoperative hemoglobin level below 10 g/dL should be considered unreasonable? Did authors not have such a common subgroup in the cohort or were such patients excluded? Authors have stated that 9 g/dl hemoglobin was used as a trigger for transfusion, but no distinction is made in the text between symptomatic and asymptomatic patients; one may presume that in some older patients, the transfusion trigger would have been higher if they had developed symptomatic anemia.

In clinical practice, TEA should however – especially for simultaneous bilateral TKA – be combined with other simple cost-effective measures such as delayed and intermittent drainage or, in selected cases, reinfusion of drained blood, not to mention optimization of preoperative hemoglobin level by administration of erythropoietin (EPO).

Following protocolized method to blood conservation and taking a holistic team approach to the issue of blood conservation can go a long way in decreasing blood loss and avoiding blood transfusion.

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