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Commentary: Clinical and financial benefits of intra-articular tranexamic acid in total knee arthroplasty

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Total knee arthroplasty (TKA) is a cost-effective means to treat end-stage knee arthritis. The annual number of TKAs has been increasing worldwide. Various means have been used to reduce blood loss and the incidence of blood transfusion during TKA.^{1,2} In TKA patients, the predictors of the need for blood transfusion are preoperative haemoglobin level, intra-operative blood loss, and post-operative drain output.³ The use of tranexamic acid has gained popularity, partly attributable to the advocacy of fast track surgery.

In this issue, Goyal et al.⁴ compared the early clinical outcome in patients who underwent primary TKA with the use of intra-articular TXA. The authors reported a lower transfusion rate and shorter hospital stay in the TXA than control group. The total cost saving with regard to the reduced blood transfusion was AU\$144 per patient. Combined with the shortened hospital stay, the total saving was AU\$631

per patient. Nonetheless, there is no consensus on the optimal regimen of TXA in TKA. Intravenous, intra-articular, oral, and combined administrations have been reported to achieve satisfactory outcome.⁵⁻⁸ The decision depends on the surgeon's preference and the cost. Although there are concerns about systemic use of TXA in increasing the risk of hypercoagulation and thromboembolic events, it was safe to use in most patients.

It is worth pointing out that the study by Goyal et al.⁴ was a retrospective review of medical records. The TXA group was compared with the historical controls. The preoperative diagnosis and patients' co-morbidities were not clearly documented. The peri-operative care in terms of deep vein thrombosis prophylaxis, rehabilitation and discharge protocol was not standardised. Therefore, the evidence generated is not as strong as that from randomised controlled trials or meta-analyses.

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