

LETTER TO THE EDITOR

[Translated article] Reconsidering preoperative transfusion testing in primary total hip and knee arthroplasty: Are they truly efficient?



Reconsiderando las pruebas pretransfusionales preoperatorias en la artroplastia primaria total de cadera y rodilla: ¿son realmente eficientes?

With the increasing number of elective total hip arthroplasty (THA) and total knee arthroplasty (TKA) surgeries, there is a growing emphasis on optimising perioperative care and reducing unnecessary healthcare costs.^{1,2} Previous studies have shown that preoperative pre-transfusion testing for elective surgical procedures is frequently unnecessary and exceeds actual and anticipated transfusion needs.³ This excessive ordering contributes to significant unnecessary costs and places an additional burden on transfusion services and healthcare systems.^{3,4} This issue is addressed in a recently published article in the Archives of Orthopaedic and Trauma Surgery journal entitled ‘‘Routine pretransfusion testing before primary total hip or knee arthroplasty are an expensive and wasteful routine. Systematic review and meta-analysis’’.⁵ This article aimed to conduct a systematic review of the literature on the necessity of routine preoperative pre-transfusion testing before TKA or THA.

Preoperative pre-transfusion tests, including blood typing, screening, and cross-matching, are routinely requested in some hospitals for all patients undergoing these procedures, regardless of their individual risk factors for transfusion.³ This study reveals a surprising prevalence of overuse of preoperative pre-transfusion tests among patients undergoing primary THA or TKA, with an astonishing overuse rate of 96.3%.⁵

Although there are many arguments against pre-transfusion testing for all patients undergoing primary THA and TKA, eliminating these tests entirely would be a mistake. The main flaw of the Maximum Surgical Blood Order Schedule (MSBOS) model is that it cannot stratify preoperative requests based on patient risk factors.³ We believe

that a primary objective should be to identify variables that help select patients requiring pre-transfusion testing, especially since some variables, such as haemoglobin (Hb), may be modifiable. The study highlights a significant disparity in preoperative Hb levels between patients who require transfusion and those who do not.⁵ Those requiring transfusion had lower preoperative Hb levels, suggesting that pre-transfusion testing should be reserved for individuals with specific risk factors, such as low Hb.

In addition, the study highlights the potential cost savings associated with a more targeted approach to pre-transfusion testing. In Spain, where 75,000 THAs and TKAs are performed each year,² reducing pre-transfusion testing could result in significant annual savings for the public health system. By reducing the overuse of these tests, health systems can achieve substantial financial benefits without compromising patient safety or the quality of care provided.

In conclusion, while the article acknowledges limitations such as the retrospective nature of the included studies and the need for additional prospective research, its findings provide compelling evidence to reconsider routine practices. The proposal to limit pre-transfusion testing to patients with preoperative haemoglobin (Hb) levels below 12g/dL in THA or primary unilateral TKA is a sensible, evidence-based recommendation. Adopting a more selective approach would optimise patient care, improve resource allocation, and ultimately contribute to a more efficient and sustainable healthcare system.

Level of evidence

Evidence level IV.

Ethical considerations

As this is a letter to the editor and does not involve human subjects or experimentation, the ethical considerations relating to informed consent, ethical procedures or privacy rights do not apply. However, we can assure you that this letter has been written with integrity and in accordance with the journal’s editorial principles.

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Conflict of interest

The authors have no conflict of interest to declare.

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