

Staggered Bilateral Knee Arthroplasty: Good or Bad?

To the Editor:

I read with interest the article by Memtsoudis *et al.*¹ in the recent issue of ANESTHESIOLOGY on perioperative outcomes after unilateral and bilateral total knee arthroplasty. When the authors discuss about the issue of benefits and risks of simultaneous *versus* staged bilateral total knee arthroplasty, they have quoted an article by Sliva *et al.*²

In the original article by Sliva *et al.*,² the authors have evaluated 332 patients who had bilateral knee replacement, of which 241 patients had staggered bilateral knee replacement with 4–7 days apart between the procedures during a single hospitalization. They found that patients who had sequential bilateral total knee replacement and staged bilateral knee replacement had 2.5 times more complications than the ones who had staggered bilateral knee replacement. The rates of complications for staggered bilateral knee replacement, sequential bilateral knee replacement, and staged bilateral knee replacement were 13, 35, and 31%, respectively. Major complications seemed to have occurred mostly in patients with staged bilateral knee arthroplasty. Hence, they had concluded that staggered bilateral total knee arthroplasty with procedures performed 4–7 days apart in a single hospitalization was a safe option.

In the article by Memtsoudis *et al.*,¹ the aforementioned article by Sliva *et al.*² has been quoted wrongly as “in a study including 267 patients who underwent bilateral total knee arthroplasty during the same hospitalization, Sliva *et al.* found that bilateral procedures performed 4–7 days apart were associated with higher risk of mortality and morbidity when compared with simultaneously performed procedures.”

I am surprised by how the main conclusions in the original article² could be completely misquoted.¹ I hope in future, such inaccurate statements will be addressed right at the editing stage.

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References

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2. Sliva CD, Callaghan JJ, Goetz DD, Taylor SG: Staggered bilateral total knee arthroplasty performed four to seven days apart during a single hospitalization. J Bone Joint Surg Am 2005; 87:508–13

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Don't Patients Have Two Knees?

To the Editor:

The article by Dr. Memtsoudis *et al.* describing perioperative outcomes after unilateral knee arthroplasty (UKA) and bilateral knee arthroplasty (BKA) uses the technique of using a large database, the Nationwide Inpatient Sample (NIS), to undertake as described in the accompanying editorial a form of “comparative effective research.”^{1,2} In their introduction, the authors state that to date, one of the major limitations of studies comparing UKA with BKA has been their small sample sizes. To avoid this problem, the authors use a large database to compare the outcomes of UKA *versus* BKA. However, in designing a study using a large database, it is important to define the population groups under study accurately.

In the total knee population, the authors defined a population of 670,305 admissions between 1998 and 2006 (9-yr period) requiring knee arthroplasty. In the “Materials and Methods,” the authors state that the NIS database contains information from approximately 8 million admissions per year. By using this number, we calculated that knee arthroplasty represented 0.93% of all admissions (670,305/72 million). Can the authors define the actual percentage that knee arthroplasty represents of all NIS database hospital admissions and more importantly of all NIS database surgical admissions for the period 1998–2006? Do the authors believe that this incidence is representative of the general population, and if not, how would this alter their results?

In the authors' article, the only significant benefit to the BKA group in this NIS population was the incidence of device-related complication, which was 0.52% in the BKA group compared with 0.86% in the UKA group. How do the authors account for this difference?

Of the 670,305 patients, 626,601 (93.75%) underwent UKA as defined by the code 81.55. This code does not differentiate between a first UKA and a second opposite-side UKA. In the BKA group, both knees require arthroplasty. Thus, should the authors include only patients who have undergone two UKA knee arthroplasties (opposite side) in the control group? If the control group consists of patients who have undergone two UKAs, should the morbidity of the two UKAs be combined? If the patient had the first UKA and then decided, for whatever the reason, not to have the second opposite-side UKA, should this be classified as a complication of the first UKA?

In the article, the authors refer to four different groups in the BKA population. The first is the total BKA population of 43,703 (6.52% of 670,305). The second is a subtotal BKA population of 34,015 patients (the total BKA group minus a