



EDITORIAL

Important Topics on Contemporary Total knee Arthroplasty: What Does Recent Literature Say?

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In the present editorial, I would like to comment on eleven recent articles that broaden our understanding of the controversial issues pertinent to total knee arthroplasty (TKA).

TKA: With or Without a Tourniquet?

Nicolaiuc et al. found no relationship between the postoperative outcome (in terms of post-surgical pain based on a numeric rating scale, as well as the need for analgesics, and function based on the range of motion and walking tests) and the use of tourniquet (1). However, two recent articles seem to indicate that there is no definite guideline for use or non-use of tourniquet (2, 3). I personally suppose that tourniquet should be inflated only during cementation.

Antibiotic-impregnated bone cement in primary TKA?

The results of the study carried out by Anis et al. on infection rates after primary TKA found no difference between the use or non-use of antibiotic-impregnated bone cement (4). In addition, the findings of a meta-analysis conducted by Kleppel et al. confirmed that there is no difference in primary TKA; however, a significant difference exists in revision TKA (5).

Zip device or staples for skin closure in TKA?

The results of a randomized controlled study carried out by Benner et al. revealed that skin closure with a zip device produces less postoperative pain, better scar appearance, and better range of motion, as compared to

closing with the staples (6).

Tranexamic acid in revision TKA

All TXA regimens analyzed by Fillingham et al. behaved in an equivalent manner in terms of blood preservation (7). They were the following: 1 g of intravenous (IV) TXA before skin incision; double dose of 1 g of TXA IV before skin incision and at the time of wound closure; a combination of 1 g of TXA IV before the skin incision and 1 g of intraoperative topical TXA; or three doses of 1950 mg oral TXA 2 hours before surgery, 6 hours after surgery, and in the morning of the first postoperative day.

Bilateral TKA: Simultaneous or staged?

Taking into account the existing controversy in terms of conduction of bilateral TKA (BTKA) simultaneously (simBTKA) or staged (staBTKA), Liu et al. carried out a systematic review on the subject (8). The results of the meta-analysis signified that simBTKA has a lower risk of deep infection and respiratory complications; however, it leads to higher mortality, pulmonary embolism, and deep vein thrombosis rates, as compared to staBTKA. However, no significant differences were found between the two groups in terms of revision, superficial infection, arthrofibrosis, cardiac, neurological and urinary complications (8).

Length of stay following TKA: Factors affecting its duration

The results of the study performed by Khanna et

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al. found five factors significantly associated with prolonged length of stay in unilateral knees. They included insurance, flexion, hyperextension deformity, the preoperative Oxford Knee Score, and a rheumatoid etiology (9).

Fructosamine: a marker of adverse events and outcomes after TKA?

Shohat et al. compared the effectiveness of fructosamine and glycated hemoglobin (HbA1c) in the prediction of early complications after TKA and determination of the threshold above which the risk of complications would increase (10). A fructosamine level of 293 $\mu\text{mol} / \text{l}$ was identified as the optimal cut associated with complications. Patients with high fructosamine ($>293 \mu\text{mol} / \text{l}$) were 11.2 times more likely to develop prosthetic joint infection, in comparison with patients with low fructosamine. These findings support the screening of all patients undergoing TKA using fructosamine and the risk of surgery should be carefully weighed against its benefit in the patients with a level above 293 $\mu\text{mol} / \text{l}$ (10).

Risks factors associated with reinfection after irrigation and debridement with liner exchange in TKA acute infection

Baker et al. conducted a study on the risk factors associated with reinfection in patients with acute prosthetic joint infection (less than 3 months) following primary TKA treated with irrigation and debridement (I&D) with liner exchange (11). The results of the mentioned study indicated a significantly higher risk of reinfection within the first year in diabetic patients aged >85 years. The risk of reinfection was found to be lower in patients treated with I&D with liner exchange within 14 days after TKA. In addition, the incidence of reinfection was 223% higher if I&D with liner exchange was performed 2 to 4 weeks after the primary TKA, and 277% higher if it was conducted > 6 weeks after the TKA, as compared to being performed in the first 2 weeks. Therefore, when we are going to carry out an I&D with liner exchange > 2 weeks after the primary TKA, patients must be informed of the risk of reinfection (11).

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