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techniques without any confounding factors. With regard to the local anesthetic administration regimen, a volume of 30 ml of local anesthetic was injected for both the block techniques. A previous MRI based study on adductor canal block considered 30 ml of volume as deemed appropriate for adductor canal block [2]. Moreover, a loading dose of 0.75% ropivacaine was considered appropriate based on several previous studies on adductor canal block technique following total knee arthroplasty using similar concentration and volume of ropivacaine [2–4]. Furthermore, we used an equal volume and concentration of local anesthetic for both continuous femoral blockade and continuous adductor canal blockade, to maintain the uniformity and comparability between the two groups and prevent confounding effects of varying volume and concentration of local anesthetic on postoperative pain and ambulation ability.

The authors of the letter raise two important points.

- 1. Was the dosage of the blockade appropriate or was it excessive?
- 2. Whether the assessment on the second day appropriate or too early?

The authors of the letter suggest that had we used a continuous femoral nerve block with ropivacaine —  $0.20\,\%$  at  $5-8\,$  ml per hour, we may have had a lesser weakness of quadriceps post-operatively and probably similar results to our adductor canal block patients. The reason we did not use a continuous infusion is due to our observation that our patients were reluctant to get out of bed when the infusion was going on with a syringe pump. Additionally  $5\,$  ml per hour of  $0.2\,\%$  ropivacaine would imply  $20\,$  ml of  $0.2\,\%$  ropivacaine at  $4\,$  hourly intervals — the exact dose that we have utilized for our femoral nerve blocks. If you consider  $8\,$  ml per hour as a continuous hourly infusion, we have in fact injected a lesser amount. Hence we believe that we have not given any excessive blockade as compared to other studies.

The ambulation assessment was carried out on the first day post-surgery to assess which group of patients were able to ambulate better as early as the first day post-surgery. We were interested in the *early functional recovery*. The adductor group was able to ambulate better as there was minimal to no discernible quadriceps weakness. We believe that our study does unequivocally show the superiority of the adductor canal blockade over the femoral nerve block as regard early functional recovery and ambulatory ability post TKA.

We are thankful to the authors of letter for their interest in our study. The advantages and the excellent results achieved by use of continuous adductor canal block technique are clearly reported in our study. Based on our conclusion, health care providers concerned with mobilization inhibition and the risk of falling from multiple day continuous femoral block techniques, may switch over to use continuous adductor canal block technique. We believe that it is a *game-changer*.

Nilen A. Shah, MS, MCH\*
Nimesh P. Jain, MS
Bombay Hospital and Research Centre, Marine Lines, Mumbai
Maharashtra, India
\*Reprint requests: Nilen. A. Shah, MS, MCH (orth), Flat no. 2,
Building no. 2, India House, Kemps corner, Mumbai, 400 026,
Maharashtra, India

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# Adverse Clinical Outcomes in a Primary Modular Neck/Stem System



#### To the Editor:

I would like to comment about the article titled "Adverse Clinical Outcomes in a Primary Modular Neck/Stem System" (*The Journal of Arthroplasty*, vol 29, no. 9, supplement, 2014).

The authors of this article dedicate a small part on radiographic study of the cases analyzed, detailing "Radiographs at minimum two year follow-up were available in 109 patients at the time of writing this text. Two year minimum radiographs were available in 68/85 patients with symptoms. Loosening of the femoral component was identified in 1 patient and symptomatic medial calcar osteolysis was seen in another one. These 2 patients were in the revised group. All other radiographs showed well fixed components with no adverse bone reaction. "

At the end of the article the authors proposed an algorithm of treatment where it was completely omitted in a decision tree to assess the patients.

I think the radiographic assessment remains today a fundamental tool in the follow-up of patients with hip arthroplasty, available in different health care systems.

Furthermore, the follow-up of these group of patients was at a minimum of 2 years, so in some cases, it is premature to assess and highlight any kind of progression of pathological signs visible on the radiographs, in one hand, important in the follow-up visits, and in the other hand, founding areas of osteolysis, a crucial factor along with other tools for the decision of revision surgery.

I believe that the most serious problem to evaluate these patients is to determine the timing for revision of the components to provide in long term follow-up the maximum satisfaction of the patient and to reduce risk of re-revision.

Even the use of the dosage of the Cr and Co should be carefully evaluated because the values available to date in the literature refer to metal on metal systems. The estimated level range limit (10–20 mg/l Co and Cr) for a systemic toxic effect should be included in the algorithm as a factor of alarm for closer monitoring [1].

More data and more systematic descriptions of the histopathology are needed to define the problem and develop strategies for proper treatment of these patients.

Sincerely,

Alessandro Calistri, MD ANCA Clinic Rome, Rome, Italy Reprint requests: Alessandro Calistri, MD, ANCA Clinic Rome Rome, Italy

> Catherine Van der Straeten, MD Koen A. De Smet, MD ANCA Medical Centre, Ghent, Belgium

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