

Lowering the platelet count threshold to $40 \times 10^9/L$ for lumbar puncture: can this represent a generalized approach? Comment on: “40 is the new 50: reducing the need for platelet transfusions prior to lumbar puncture in adults with hematologic malignancies”

I read with great interest the study by Corrao *et al.*,¹ in which the authors compared the platelet count thresholds of $40 \times 10^9/L$ and $50 \times 10^9/L$ for lumbar puncture (LP) regarding serious bleeding complication and traumatic spinal tap rates. Recent American Association of Blood Bank (AABB) guidelines recommend a pre-procedure platelet count of $50 \times 10^9/L$ for LP.² In their study,¹ there were only four serious bleeding complications, and the authors showed that there was no increased risk of traumatic spinal tap when lowering the platelet count threshold to $40 \times 10^9/L$. This study is extremely important since there are not many studies previously published on this topic, with no randomized controlled trials. On the other hand, there are still some points that need to be underlined.

- As the procedures were performed in patients with hematological malignancies, I suppose the LP were done for both diagnostic and therapeutic purposes. Complication rates may differ between diagnostic and therapeutic interventions, since a spinal tap done for intrathecal chemotherapy might take longer to complete than that of diagnostic LP, due to the fact that as the procedure takes longer, the risk of complications obviously increases.³ So, it would be interesting to see the distribution of diagnostic and therapeutic interventions within each group and maybe the comparison of LP done for diagnostic and therapeutic purposes regarding rates of traumatic spinal tap also for each patient group.

- Since all LP were not performed by the same person, differences in the complication rates may occur due to interphysician differences.³ The complication risk is generally low when the procedure is performed by a more experienced physician, so, maybe more experienced physicians tend to perform the LP in patients within the 40 group, which led to these results showing no difference in complication rates when compared to those in the 50 group.¹

- Lastly, although the percentages of patients receiving spinal taps with landmark-based approach were comparable between patient groups, most of the cases in both

groups had LP done by either guided by ultrasound or fluoroscopy. Globally the most commonly used method for spinal tap is still the landmark-based approach, so I am not entirely sure that the results of this study is generalizable.

On patients with malignancies diagnostic and therapeutic LP are performed. A pre-procedure platelet count of $50 \times 10^9/L$ is usually accepted as a threshold among oncology patients, but as shown by Corrao and colleagues,¹ LP can be performed safely after lowering the platelet count threshold to $40 \times 10^9/L$. One must, however, remember that, while performing a spinal tap, there may be other confounding factors that might play a role in the generation of bleeding complications together with pre-LP platelet counts.

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Disclosures

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