

The **next generation** GBCA  
from Guerbet is here

Explore new possibilities >

Guerbet | 

© Guerbet 2024 GUOB220151-A

# AJNR

## Regarding "Rates of Epidural Blood Patch following Lumbar Puncture Comparing Atraumatic versus Bevel-Tip Needles Stratified for Body Mass Index"

B. Branstetter, V. Agarwal and M. Hughes

This information is current as of March 4, 2024.

*AJNR Am J Neuroradiol* 2023, 44 (2) E11  
doi: <https://doi.org/10.3174/ajnr.A7562>  
<http://www.ajnr.org/content/44/2/E11>

## Regarding “Rates of Epidural Blood Patch following Lumbar Puncture Comparing Atraumatic versus Bevel-Tip Needles Stratified for Body Mass Index”

We read with interest the article by Philip et al<sup>1</sup> on postprocedural complications after fluoroscopically-guided dural puncture (fLP) because their results were dissimilar to those in our own research.<sup>2</sup> In our study of 2141 patients who underwent fLP with Quincke needles, 0.8% (18/2141) required an epidural blood patch (EBP) for postprocedural headache. In contrast, of the 2258 patients who underwent fLP with Quincke needles in the study by Philip et al, 4.3% (97/2258) required EBP. Of the patients who underwent fLP with Whitacre spinal needles in their study, 1.4% (30/2177) required EBP. We have several questions for Philip et al that might help us to understand the higher rates of EBP in their patients and may call into question their conclusion that atraumatic needles result in lower rates of EBP from fLP in overweight and obese patients.

Young age and female sex are predisposing factors for positional headaches following lumbar puncture, as confirmed in our study.<sup>2</sup> No data were provided in the article by Philip et al<sup>1</sup> regarding the age and sex of patients. There might be a higher percentage of young women among the patients treated with Quincke needles or among their patient population overall compared with our cohort.

We note in Table 3 of the article by Philip et al<sup>1</sup> that the *P* value for needle caliber was <.001 in patients with a body mass index of >30, yet the 95% confidence interval of the odds ratio encompasses unity. These statistics appear to be internally discrepant. We note this particularly because in our study, we did not find the needle caliber to be a predictive variable.

All procedures in our study were performed by a single experienced operator. Philip et al<sup>1</sup> indicated that procedures in their study were performed by radiologists, but they provided no information about years in practice or number of cases performed by each practitioner in a typical year. It is unclear whether trainees were the primary operators in these procedures. Given that Quincke needles are more steerable, might radiology residents

prefer them while the more experienced attending radiologists prefer Whitacre needles? Needles were chosen by the operators in this retrospective study, so operator preference, experience, and expertise are important confounding variables that were not included.

The advantages of atraumatic needles in unguided (blind) dural punctures have been established in the neurology literature. It remains controversial, however, whether these advantages are present when image guidance is used. The rate of EBP in fLP is markedly lower than that for unguided punctures, which may obviate any advantage of needle choice.

It is unclear to us why our rate of postprocedural EBP is substantially lower than that recorded by Philip et al.<sup>1</sup> This rate may reflect differences in technique, patient population, or operator expertise. The work by Philip et al is interesting, but firm conclusions regarding the relative advantages of needle type in fLP should be based on literature that controls for patient characteristics such as age and sex as well as operator characteristics such as experience.

Disclosure forms provided by the authors are available with the full text and PDF of this article at [www.ajnr.org](http://www.ajnr.org).

### REFERENCES

- Philip JT, Flores MA, Beegle RD, et al. Rates of epidural blood patch following lumbar puncture comparing atraumatic versus bevel-tip needles stratified for body mass index. *AJNR Am J Neuroradiol* 2022;43:315–18 CrossRef Medline
- Rodriguez D, Branstetter BF, Agarwal V, et al. JOURNAL CLUB: incidence of complications following fluoroscopically guided lumbar punctures and myelograms. *AJR Am J Roentgenol* 2016;206:20–25 CrossRef Medline

✉ B. Branstetter

✉ V. Agarwal

✉ M. Hughes

Department of Radiology  
University of Pittsburgh Medical Center  
Pittsburgh, Pennsylvania

<http://dx.doi.org/10.3174/ajnr.A7562>