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Letters to the Editor

To the Editor:

We enjoyed reading Dr Guirguis's case report regarding a suspected iatrogenic phrenic nerve palsy following supraclavicular brachial plexus block (*The Ochsner Journal,* Volume 12, Number 2). The case accurately highlights a well-known risk of brachial plexus blockade and reinforces the need to consider excluding patients with poor pulmonary reserve. Traditional high-volume injections of local anesthetic (>30 mL) are reported to result in near-universal involvement of the phrenic nerve and subsequent paralysis of the ipsilateral hemidiaphragm.[1] Direct needle visualization with ultrasound guidance allows for directed lower volume anesthetic injections that significantly reduce, but do not nullify, the risk of diaphragmatic paralysis.[2] In our practice, we have found that ultrasonographic evaluation of the ipsilateral diaphragm with B-mode ultrasound after low-volume brachial plexus block is both rapid and easy to learn. By placing a low-frequency curvilinear transducer in the posterior axillary line, the clinician can rapidly evaluate the diaphragm for normal movement during the respiratory cycle.[3] In patients who become acutely dyspneic, tachypnic, or hypoxic after brachial plexus block, the ultrasound of the ipsilateral diaphragm is a prudent evaluation that should occur in conjunction with other diagnostic and resuscitative measures.

Sincerely,
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REFERENCES

1. Urmey WF, Talts KH, Sharrock NE. One hundred percent incidence of hemidiaphragmatic paresis associated with interscalene brachial plexus anesthesia as diagnosed by ultrasonography. *Anesth Analg*. 1991 Apr;72(4):498-503.
2. al-Kaisy AA, Chan VW, Perlas A. Respiratory effects of low-dose bupivacaine interscalene block. *Br J Anaesth*. 1999 Feb;82(2):217-220.
3. Mantuani D, Nagdev A. Sonographic evaluation of a paralyzed hemidiaphragm from ultrasound-guided interscalene brachial plexus nerve block. *Am J Emerg Med*. 2012 Mar 28. [Epub ahead of print].

Author's Reply:

Checking for diaphragmatic movement with ultrasound postblock is a great idea. I know it is somehow limited in morbidly obese patients, but I still think it will speed the diagnosis as it is much faster than an x-ray. I also think that checking for the movement on both sides before performing the block can help in screening patients who have unilateral diaphragmatic paralysis from any other cause.

As you can see from our case, the block might affect the functioning side of the diaphragm, which might cause drastic complications.

Kind regards,
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To the Editor:

As a new member of the Pediatric Hematology/Oncology group at Ochsner, I was extremely pleased and impressed that the entire fall edition of *The Ochsner Journal* (Volume 12, Number 3) was dedicated to pediatric oncology. Dr Warrier did an excellent job of selecting articles and reviews that encompass a wide range of current issues in the field. The review articles entitled "Management of Immune Thrombocytopenia: An Update" by Warrier and Chauhan and "Immunization of Children Receiving Immunosuppressive Therapy or Hematopoietic Stem Cell Transplantation" by Shetty and Winter are excellent resources—not only for the pediatric hematologist but also for the general pediatrician. The case report entitled "Diffuse Pontine Astrocytoma With Lipocytic Differentiation" by Craver et al presented an unusual case in which a normally more benign tumor, a lipoastrocytoma, clinically behaved much more like an aggressive glioma. Pontine gliomas have one of the worst prognoses of any

pediatric tumor, with nearly all patients dying within a year of diagnosis. In many cases, these tumors are not biopsied or resected because of their location, and many centers do not have resources in place to acquire tumor tissue quickly after death, so the pace of our understanding of the biology of these tumors has been extremely slow. This case report serves to illustrate the need for further research into the biology of these tumors so that we can develop more effective therapies.

Overall, I found this issue extremely informative and, for me personally, a wonderful welcome to Ochsner.

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