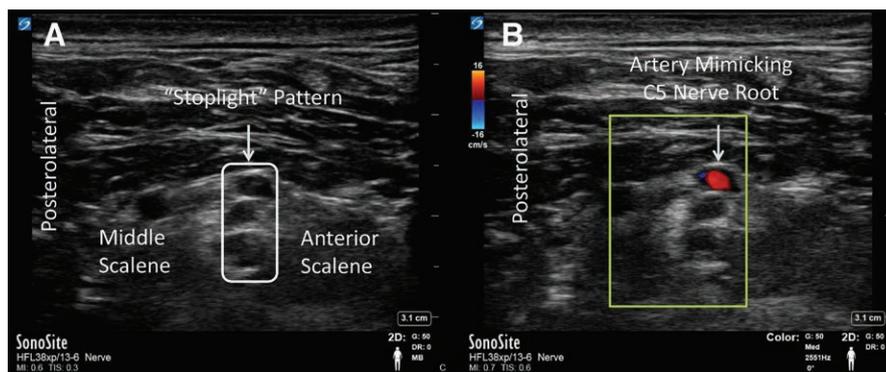


Interscalene Brachial Plexus Block

“Stoplight” That Lit Up Red

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SONOGRAPHIC guidance has increased the efficacy of regional anesthesia and improved safety by reducing the minimum effective local anesthetic volume¹; however, block failures still occur due to anomalous anatomy and/or sonographic misidentification of relevant structures.² The ultrasound image presented (image A) demonstrates the typical “stoplight” pattern of three vertically

oriented hypoechoic structures denoting C5 and C6 of the brachial plexus, lying between the anterior and middle scalene muscles.³ However, color Doppler imaging (image B) reveals blood flowing through a transverse cervical artery viewed in cross section, mimicking the sonographic appearance of the C5 nerve root (see the Supplemental Digital Content, <http://links.lww.com/ALN/B769>, a video that demonstrates color Doppler flow through the artery). Because ultrasound works by detecting differences in tissue density, anatomic structures with tissue homogeneity typically produce hypoechoic signals. In this case, blood inside an artery and solid neural tissue are both homogenous and of similar size, and misidentification may occur. Arterial and venous structures can be sonographically differentiated from neural structures through compressibility, pulsatility, and application of color Doppler. Image B highlights the importance of sonographic guidance, but underscores the need for awareness of anatomic features and their interpretation throughout interventional procedures.

Competing Interests

The authors declare no competing interests.

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