The Greater Occipital Nerve (GON) can be sonographically localized by consistent identifiable musculature and boney landmarks. Under ultrasound guidance the GON can be identified as it exits the C2 neural foramen and followed both transversely as well as longitudinally as it turns posteriorly and superiorly over the obliquus capitis inferior muscle. With the GON well localized, the radicular and suboccipital arteries adjacent the GON are then identified using low flow Doppler.

This study demonstrates the technique and significant advantages when the GON is visualized extra-foraminaly in not only in transverse but in longitudinal. The GON block can then be inspected longitudinally to confirm proper bolus flow from the extra-foraminal peri-neural location toward the occiput.

This advanced sonoanatomy can, not only improve the chances of a “complete” block, but reduce the chance of retrograde peri-neural anesthetic flow and/or inadvertent vascular inject.

Keywords: ultrasonography; greater occipital nerve; obliquus capitis inferior muscle; rectus capitis posterior major muscle

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