

An Independent C1 Nerve Root Variant of the Ansa Cervicalis: A Cadaveric Case Report

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Background: The ansa cervicalis (AC) is a neural loop within the carotid triangle of the neck that plays important sensory and motor roles associated with neck stabilization, vocalization, and swallowing. The loop is formed by nerve roots C1-C3 of the cervical plexus and descends the carotid triangle to give off multiple sensory and motor branches within the neck. The complex branching lends itself to the formation of anatomical variations.

Case Presentation: In the current case report, an anatomical variation of the right ansa cervicalis was identified in an 86-year-old Caucasian male cadaver. Rather than connecting with the inferior nerve roots of C2 and C3, the C1 nerve root remained independent, traveling deep to the superior belly of the omohyoid muscle to supply the sternothyroid and sternohyoid muscles.

Conclusion: The ansa cervicalis is an important anatomical landmark within the neck and can be utilized surgically during laryngeal reinnervation and respiratory nerve stimulation in patients with sleep apnea. The current anatomical variant contributes to a relatively limited catalog of identified anomalies. Knowledge of new ansa cervicalis variations can inform future surgical procedures and further the current base of knowledge surrounding neuromuscular structures of the head and neck.

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