The sixth cervical ventral spinal rami leave the vertebral column above the transverse processes of C6 and emerge between scalenus anterior and scalenus medius, deep to the internal jugular vein and sternocleidomastoid muscle.

Before joining with the ventral rami of C5 to form the upper trunks of the brachial plexus, the sixth cervical ventral spinal rami give rise to branches, which join with branches of the ventral rami of C5 and C7 to form the long thoracic nerves. From the upper trunks of the brachial plexuses the nerves to subclavius and the suprascapular nerves arise.

Each ramus receives at least one grey ramus communicans from the middle cervical ganglion.

Supply

The sixth cervical ventral spinal rami supply the longus colli, scalenus anterior, scalenus medius, scalenus posterior, serratus anterior, subclavius, supraspinatus and infraspinatus muscles and the muscles of the upper limb via the brachial plexus. Cutaneous branches to the upper limb are also distributed via the brachial plexus.