

The third lumbar ventral spinal rami exit the vertebral column through the intervertebral foramina between the pedicles of L3 and L4. They are larger than the ventral rami above and emerge above the transverse processes of L4, where they are connected to adjacent sympathetic ganglia by grey (proximal) and sometimes white (distal) rami communicantes.

They pass around the sides of the body of L3 with the lumbar arteries initially behind and then within the psoas major muscles. They join with the ventral rami of L1, L2 and L4 to participate in the formation of the lumbar plexus. Within psoas major each ventral ramus divides into ventral and dorsal branches.

The ventral branches join with the ventral branches of the ventral rami of L2 and L4 to form the obturator nerves. The dorsal branches divide into small and large branches; the small branches join with the corresponding branches of the ventral rami of L2 to form the lateral cutaneous nerves of the thigh, and the large branches join with the dorsal branches of the ventral rami of L2 and L4 to form the femoral nerves.

Supply

The third lumbar ventral spinal rami supply the quadratus lumborum, iliacus, psoas major and quadriceps femoris muscles as well as the adductor muscles of the thigh. Cutaneous fibers are distributed in the lateral cutaneous nerves of the thigh, femoral and obturator nerves.