

The **arachnoid mater** is the middle layer of the spinal meninges. It is a thin transparent membrane, which is continuous with the cranial arachnoid mater. It is closely applied to the deep aspect of the dura mater, being separated by the potential subdural space. Where vessels and nerves enter/leave the subarachnoid space the arachnoid mater is reflected onto their surface forming a subarachnoid angle as nerves pass through the dura mater into the intervertebral foramina; at this point the arachnoid and pia mater fuse and become continuous with the perineurium.

The pia mater is the deepest layer of the spinal meninges it closely invests the surface of the **spinal cord** and passes into the anterior median fissure. Over the surface of the spinal cord there is a subpial collagenous layer, thicker in the cervical region, which is continuous with the ligamentum denticulatum. The **filum terminale** is a continuation of the pia mater beyond the conus medullaris. The upper part (filum terminale internum) is surrounded by extensions of **dura and arachnoid mater** and extends as far as the lower extent of the dural sac (lower border of S2). The central canal continues into its upper third. The filum terminale internum is surrounded by subarachnoid space and is the elective site for lumbar puncture. The lower part (filum terminale externum) fuses with the covering dura as it descends to attach to the dorsum of the first coccygeal vertebra.

The **denticulate ligament** is a continuous flat sheet of triangular tooth-like lateral extensions situated on each side of the spinal cord between the ventral and dorsal roots. Medially it is continuous with subpial connective tissue covering the spinal cord. Laterally the **apices** are attached to the dural sac. There are usually 21 projections on each side, the **first** of which crosses behind the vertebral artery and separates it from the C1 ventral root. Its apex attaches to the dura mater above the rim of the foramen magnum behind the hypoglossal nerve. In the upper cervical region the spinal accessory nerve passes on its posterior aspect. The lower lateral projection of the ligament is between the exits of the T12 and L1 spinal nerves, being a narrow oblique band descending laterally from the conus medullaris. The ligament anchors the spinal cord, protecting it from injury due to violent contact with the walls of the vertebral foramen during movement, although it does change its form and position during movement.