The vertebral venous plexus, of which there is an external and internal part, provides venous drainage for the individual vertebrae of the spinal column. The internal venous plexus, which is further subdivided into anterior and posterior parts, lies within the vertebral canal (but outside the dura mater) and drains the internal aspect of the vertebrae. The anterior internal plexus forms large plexiform veins on the posterior surface of the vertebral bodies and intervertebral discs, either side of the posterior longitudinal ligament and superficial to the dura mater.

The anterior internal plexuses communicate across the vertebral bodies by transverse branches deep to the posterior longitudinal ligament; they are also connected to the posterior internal vertebral venous plexus at each vertebral level. They communicate freely with the external vertebral venous plexuses via the basivertebral veins and in the cervical region, have numerous rostral communications, such as the occipital and sigmoid sinuses, basilar plexuses, venous plexuses of the hypoglossal canal and condylar emissary veins.

The internal venous plexuses drain into the vertebral (near the foramen magnum), posterior intercostal, lumbar and lateral sacral veins.