Atlantooccipital ligament

The anterior atlantooccipital membrane (anterior atlantooccipital ligament) is broad and composed of densely woven fibers, which pass between the anterior margin of the foramen magnum above, and the upper border of the anterior arch of the atlas below. It is a continuation of the anterior longintudinal ligament. Laterally, it is continuous with the articular capsules. In front, it is strengthened in the middle line by a strong, rounded cord, which connects the basilar part of the occipital bone to the tubercle on the anterior arch of the atlas.

This membrane is in relation in the front with the rectus capitis anterior muscles, behind with the alar ligaments.

The posterior atlantooccipital membrane (posterior atlantooccipital ligament) is a broad but thin membrane. It is connected above to the posterior margin of the foramen magnum and below to the upper border of the posterior arch of the atlas. It is a continuation from the Ligamentum Flavum.

On each side of this membrane there is defect above the groove for the vertebral artery which serves as an opening for the entrance of the artery. The suboccipital nerve also passes through this defect.

The free border of the membrane arches over the artery and nerve and is sometimes ossified.

The membrane is deep to the rectus capitis posterior minor and obliquus capitis superior muscles, and is superficial to the dura mater of the vertebral canal to which it is closely associated.