

Band of Giacomini

The band of Giacomini is also called the tail of the **dentate gyrus** and is an important anatomical landmark of the inferior surface of the uncus.

It is a visible segment of the dentate gyrus. Most of the dentate gyrus is not exposed to the brain surface, its visible sections include the margo denticulatus in the head, the band of Giacomini in the uncus and fasciola cinerea in the tail 1.

Posterior to the band of Giacomini, the uncus apex is formed by CA3 and CA4, and covered by the alveus. The fimbria is attached to its extremity ¹⁾.



<http://www.hindawi.com/journals/ert/2012/769825/fig6/>

The medial view of the anterior segment of the **medial temporal region** (MTR). (This illustration correlates with Figures 6(b) and 6©). The **anterior choroidal artery** (AChA) gives off an **anterior uncus artery** that irrigates the **semilunar gyrus** and an **uncohippocampal artery** that irrigates the **uncinate gyrus** and **band of Giacomini** and penetrates the **uncus sulcus** to vascularize the extraventricular hippocampal head. The **internal carotid artery** (ICA) gives off an anterior **uncus artery** that supplies the semilunar gyrus. This branch usually is present when the anterior uncus artery of the AChA is absent. An anterior uncus artery also arises from the M1 segment of the **middle cerebral artery** (MCA) and supplies the **ambient gyrus**. An **uncohippocampal artery** arises from the **temporopolar artery** and irrigates both the **ambient gyrus** and the anterior parahippocampal area. Branches from the P2a segment of the PCA irrigate the anterior parahippocampal region (anterior parahippocampal artery) or both the anterior parahippocampal gyrus and hippocampal head (anterior hippocampal-parahippocampal artery). (b) The medial surface of the anterior segment of the left MTR. The white arrow points the posterior end of the uncus notch. The anterior part of this segment is irrigated by middle cerebral branches (orange shaded area), the posterosuperior part is supplied by anterior choroidal branches (blue shaded area), and the posteroinferior part is vascularized by posterior cerebral branches (yellow shaded area). The ICA typically supplies the area supplied by the AChA and the MCA if their branches are absent. The branches of the MCA are the anterior uncus artery superiorly and the unco-parahippocampal artery inferiorly. The branches of the AChA are the anterior uncus artery anteriorly, the posterior uncus artery posteriorly, and the unco-hippocampal artery posteroinferiorly. The branches of the PCA are the anterior hippocampal-parahippocampal artery medially and the anterior parahippocampal artery laterally. Areas of vascular anastomosis are typically found at the confluence of vascular territories (curved arrows). © The same view of (a) in a silicon injected anatomic specimen. (d) Inferior view of the anterior segment of the left MTR. The inferior lip of the posterior uncus segment has been removed to expose the extraventricular hippocampal head. The semilunar gyrus has been retracted to expose the branches of the AChA. Two anterior uncus arteries arise from the first one-third of the AChA and irrigate the semilunar gyrus. A posterior uncus artery from the AChA penetrates the uncus sulcus and irrigates the extraventricular hippocampal head. An anterior hippocampal-parahippocampal artery arising from the anteroinferior temporal branch of the PCA gives rise to an anterior hippocampal branch that supplies the extraventricular hippocampal head and anastomoses with the unco-hippocampal branch of the AChA (green arrow). (e) Lower surface of the anterior segment of the right MTR. The entorhinal area is irrigated medially by the parahippocampal branch of the anterior hippocampal-parahippocampal artery that arises from the P2a, and laterally by a large anterior parahippocampal artery that originates from the anterior inferior temporal artery. A.: artery; A.C.A.: anterior cerebral artery; A.Ch.A.: anterior choroidal artery; Amb.: ambient; Ant.: anterior; Car.: carotid; Chor.: choroidal; Dent.:

dentate; Entorhin.: entorhinal; Giac.: Giacomini; Hippo.: hippocampus; ICA: internal carotid artery; Inf.: inferior; Intralimb.: intralimbic; Lent.: lenticulo; M.C.A.: middle cerebral artery; M1.: M1 segment of middle cerebral artery; Parahippo.: parahippocampal; P.C.A.: posterior cerebral artery; P2A.: anterior part of the P2 segment of posterior cerebral artery; P2P.: posterior part of the P2 segment of posterior cerebral artery; P.Co.A.: posterior communicating artery; Ped.: peduncle; Pol.: polar; Semianul.: semiannular; Semilun.: semilunar; Str.: striate; Sulc.: sulcus; Temp.: temporal; Tr.: tract; Unc.: uncal; Uncin.: uncinuate; V.: vein.

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Duvernoy HM. The Human Hippocampus. Springer. ISBN:3540231919.

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Last update: **2024/06/07 02:55**

