

The internal carotid artery in early eutherians

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Although evidence from comparative anatomy and embryology shows that only one Internal carotid artery is present among extant eutherians, numerous early eutherians have two vascular-like grooves on the petrosal suggesting the presence of two separate internal carotids. It is argued here that the most acceptable model for the interpretation of this morphology places the single internal carotid in the lateral groove and a venous channel (inferior petrosal sinus) in the medial one. This lateral course for the internal carotid artery is not necessarily primitive for Eutheria, only widespread among early groups. The earliest known eutherian basicrania have only a medial groove and therefore, a medial course to the internal carotid. However, based on ontogenetic research, this medial course in the earliest known eutherians was most likely not identical with the medial course in non-eutherian mammals.

Key words: internal carotid artery, basicrania, early eutherians, petrosal, inferior petrosal sinus.

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