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SUNUNTA CHUNCHEER : MICROVASCULARIZATION OF THALAMUS AND METATHALAMUS IN COMMON TREE SHREW (*Tupaia glis*). THESIS ADVISOR: REON SOMANA, M.D., Ph.D., BOONSIRM WITHYACHUMNARNKUL, M.D., Ph.D., SIRINUSH SRICHAREONVEJ, Ph.D. 98 p. ISBN 974-663-483-6

The microangioarchitecture of the thalamus and metathalamus in the common tree shrew (*Tupaia glis*) was elucidated using vascular corrosion cast/SEM technique. It is found that the arterial supply of the thalamus and metathalamus in the common tree shrew is from four sources. The first source is from the posteromedial arteries (thalamoperforating arteries) arising from the whole extent of the posterior communicating artery and from the proximal part of the posterior cerebral artery. They supply the ventral and posteromedial parts of the thalamus. The second source consists of posterolateral arteries (thalamogeniculate arteries) which are branches of the distal part of the posterior cerebral artery. They send off penetrating branches being 'hair-comb-like' pattern to supply the dorsal and posterolateral parts of the thalamus and the medial geniculate body. The third source is the anterior choroidal artery arising from the internal carotid artery and giving a few branches to form the choroid plexus in the lateral ventricle and other branches supply ventrolateral part of the thalamus and the lateral geniculate body. The last one consists of striate branches of the middle cerebral artery and end in the most anterior portion of the thalamus. These thalamic arteries give rise to bipinate arterioles with gradually decreasing diameters before feeding into the continuous capillary bed. The capillaries in the thalamus and metathalamus carry the blood into venules which flow into thalamostriate vein. The venous blood from the superficial parts of the thalamus and metathalamus are drained into the thalamocollicular vein, while the internal cerebral vein conveys the venous blood from the internal aspects of the thalamus. The thalamocollicular and the internal cerebral veins carry the venous blood into the great cerebral vein of Galen, straight sinus and then into transverse sinus. Some of the venous blood from the most rostral part of the thalamus collects into the tributaries of the middle cerebral vein before draining into the cavernous sinus, superior petrosal sinus, transverse sinus and lastly into the external jugular vein mainly and some into the internal jugular vein.