Breschet’s Sphenoparietal Sinus Does Not Drain Cortical Venous Blood

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Purpose
Breschet introduced the term sphenoparietal sinus (SPHPS) in his works on the human venous system between 1827 and 1830. These works were published incompletely and made no clear description of the SPHPS. The figures in the text illustrate a dural vessel that courses under the sphenoid lesser wing (SPHLW), which drains dural and diploic blood. However, most of the anatomical, radiologic and surgical literature assimilate the SPHPS to the terminal portion of the superficial middle cerebral vein (SMCV). We present findings from an anatomical study which demonstrate that the SPHPS and the SMCV are two distinct and separate venous channels.

Materials & Methods
The anatomical study was performed on cerebral venous vascular casts and correlated to anatomical dissections of fresh specimens. The angiographic anatomy of the SPHPS was studied by digital subtraction angiography (DSA) during routine diagnostic examinations.

Results
On all occasions, the SPHPS represented the parietal and sphenoidal (SPHLW) continuation of the middle meningeal veins (MMV), and its major tributaries were diploic veins of the sphenoid greater wing and the orbital roof. The SMCV was not seen to communicate with the SPHPS, and seldom course under the SPHLW. Whenever the SMCV displayed contacts with the dura of the LSPHW, it did not enter the dura until draining into the cavernous, paracavernous, or laterocavernous sinus. The SPHPS and its tributaries could be identified on late venous phases of common carotid artery DSA.

Conclusion
The SPHPS and the SMCV drain the neuro-cranium and the peri-insular cortex respectively, they are found in different meningeal layers and do not communicate. The SPHPS is the prolongation of the MMV and must cease to be assimilated to the SMCV.