

38**Neurosonologic Aspect of ACA and MCA in a Young Male Patient with Congenital Lack of MCA and Stroke**Romanitan M.O.², Nica C.¹^{1,2} *Department of Neurology, Emergency University Hospital, Bucharest, Romania*

We present the case of a 37 years old male patient, smoker, with no personal medical history, which was hospitalized for episodes of 24 to 48 hours of left hemiparesis.

The laboratory tests for risk factors for atherothrombosis showed hyperhomocysteinemia. The cerebral MRI showed white matter hyperintensities on FLAIR and T2 weighted images with right temporal and anterior limb of the right internal capsule distribution with peripheral gadolinium enhancement and diffusion restriction.

The Transcranial Doppler ultrasonology through the temporal window revealed at 50 - 65 mm depth the lack of insonation of the M1 segment of the MCA while at 35 - 50 mm depth the velocimetry was present and corresponding to the M2 segment of MCA. The cerebral angiography showed the absence of the blood flow on the right MCA and the presence of the flow at this level through collaterals of ACA (branches of callosum marginalis artery).

The final diagnosis was ischaemic stroke in the right MCA territory through atherothrombotic mechanism.

Our case particularity: young male patient, with no evidence of heredocollateral or personal pathological conditions, with risk factors for atherothrombosis such as smoking and hyperhomocysteinemia, with congenital vascular abnormality: lack of right MCA with the collateral vascularization from ACA through callosum marginalis artery which presented progressive clinical symptomatology according to consecutive strokes in the terminal branches of the ACA corresponding to the anatomical area of vascularization of the MCA.

39**Hypoplasia of the Internal Carotid Artery: A Case Report and Review of the Collateral Circulation**Nicoletti G.¹, Bruno F.¹, Tardi S.¹, Sanguigni S.², Malferrari G.³, Accorsi F.⁴¹ *Geriatrics, Hospital Madonna delle Grazie, Matera, Italy*² *Neurology, Hospital Madonna del Soccorso S. Benedetto del Tronto, Italy*³ *Neurology, ASMN Reggio Emilia, Italy*⁴ *Internal Medicine Department, Ospedale Maggiore Bologna, Italy*

We describe a case of a 66-year-old man with hearing loss on the left side and no other symptoms or signs related to vascular impairments. Color duplex of the extracranial cerebral vessel showed a kinking and a diffuse narrowing (diameter 2

mm) at the level of the left internal carotid artery (ICA).

An angio magnetic resonance imaging confirmed a narrowing of the left ICA and showed a diminutive carotid canal omolateral. Hypoplasia of the ICA is a rare congenital disease. Six pathways of collateral circulation in association with a/hipoplasia of the ICA are described. A: a/hipoplasia of the ICA is associated with anterior communicating artery (ACOM) and posterior communicating artery (PCOM) hypertrofia. B: a/hipoplasia of the ICA is associated with ACOM hypertrofia. C: a/hipoplasia of the ICA is associated with carotid vertebrobasilar anastomoses. D: a/hipoplasia of the ICA is associated with intercavernous communication. E: there is a bilateral hypoplasia of the ICA. The anterior cerebral artery are supplied by hypoplastic ICAs while the middle cerebral arteries are supplied by enlarged PCOMs. F: the hypoplasia of the ICA is associated with anastomosis from the omolateral external carotid artery.

Consideration of the ICA's hypoplasia is important not only because may help prevent the erroneous diagnosis of carotid dissection or high grade of stenosis, but also because is associated with high prevalence of intracranial aneurism and has important implications during carotid endarterectomy. Moreover emboli in one cerebral hemisphere may be explained by atherosclerosis disease in the contralateral common carotid artery or vertebrobasilar system.

40**A Case of Basilar Embolism and "Spectacular Shrinking Deficit": Transcranial Color Coded Doppler Study**Nicoletti G.³, Nicolai A.³, Albano G.A.³, Bruno F., Tardi S., Sanguigni S.¹, Malferrari G.²¹ *Neurology, Hospital Madonna del Soccorso S. Benedetto del Tronto, Italy*² *Neurology, ASMN Reggio Emilia, Italy*³ *Geriatrics, Hospital Madonna delle Grazie, Matera, Italy*

Introduction: The purpose of this report is to highlight the utility of transcranial color coded doppler sonography (TCCD) in a patient with suspected basilar occlusive disease and "spectacular shrinking deficit".

Case report: A 79-year old woman during an upper endoscopy cardioverted by atrial fibrillation. A few hours later the patient was admitted to the emergency department with acute loss of consciousness followed by gaze palsy, pupillary abnormalities and tetraparesis. Computed tomographic scanning (TC) of the head showed an old infarct in the left occipital lobe.

Extracranial duplex sonography of the carotid and vertebral arteries was unremarkable. TCCD enhanced by sonographic contrast agent (Sonovue) showed "dampened flow", at the level of basilar artery. Two hours later the symptoms resolved quickly without leaving residual neurologic signs.

The day after a TCCD showed a mean flow velocity increased