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## Drop-Attacks and Trigeminal Artery Persistence

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We report a case of a 58 years old woman that presents frequent episodes of drop-attacks.

The old examinations: EEG, encephalic CTscan, TSA, Holter-ECG, was normal.

The ultrasonographic study with TCCD showed normal pattern in Willis' anterior circulation. The occipital approach showed a short asymmetry in V4 segments of vertebral arteries.

But the study of basilar artery by occipital approach showed a normal flow pattern in the vessel until a depth of 14.5 mm. At the superior depth (with use of ultrasound contrast agent - SonoVue®) we saw an important reduction of the flow that remain the same for a distance of 1.5 cm.

The passage between clino and orto statism, valsalva manoeuvre, efforts ecc. sometimes causes a phenomenon of transient inversion of the flow but only in the distal segment of the basilar artery.

A subsequent encephalic RMN with angio showed an anomalous persistence of the right trigeminal artery that represents an anomalous connection between siphon and basilar artery (anterior and posterior circulation).

We think that this thing can explain the history of persistent drop attacks in the life of our patient that was previously diagnosed as psychiatric.

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## Transcranial Sonography (TCS) and Multiple Axial and Coronal Mesencephalic Scans in Idiopathic Parkinson Disease (IPD): a Proposal for a Variant Approach

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**Objective:** to date, even if it is unknown whether the extent of Substantia Nigra (SN) hyperechogenicity correlates with the degeneration of presynaptic dopaminergic neurons, a more precise quantification of the damage is required, in order to improve the diagnosis.

**Patients and Method:** our investigations involved 18 patients with IPD (age 45-80 years) and 10 healthy volunteers. Sonographic examination (Toshiba Aplio) started with the evaluation of mesencephalic brainstem in axial scanning planes

involving two different regions. SN echogenicity was quantified by a planimetric measurement of the extension of hyperechogenic signals obtained in each scan. Finally, a coronal scan of the SN allowed a longitudinal view for a global visualization of the lesions.

**Results:** all patients had mean higher values than healthy controls. Some subjects, with the same extent of the hyperechogenic SN signal at the level of its greatest dimension (but different disease severity), showed a distinct hyperechogenic pattern, considering the result of the two separate measurements. Probably, tissue iron content stores gradually and irregularly in the different regions of the SN, leading through functional impairment of the nigrostriatal dopaminergic system.

**Conclusions:** previous longitudinal studies indicate that the ultrasound signal does not change in the course of PD and the same size of SN echogenicity could be found in early as well as late stages of the disease, whereas parkinsonian symptoms clearly progress in time. But, until now, measurements were detected employing just one section of the maximum extension of hyperechogenic signals. Instead, multiple scans could indicate a significant correlation between the level of echogenicity in the SN and the clinical stage.

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## The Risk of Microembolism Depends on Method of Pulmonary Veins Isolation as a Treatment for Atrial Fibrillation

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**Introduction:** Pulmonary vein isolation (PVI) has become an established treatment for patients with atrial fibrillation (AF). However, peri-intervention complications like, TIA, stroke and cognitive decline related to cerebral emboli may occur. The incidence of microembolic signals (MES) was determined during percutaneous PVI; conventional radiofrequency (RF) ablation, irrigated tip RF ablation and cryo balloon ablation were compared.

**Methods:** Twenty-three patients underwent catheter PVI. An ostial isolation was performed with a conventional RF ablation catheter in 10 patients and with an irrigated tip RF ablation catheter in 6 patients. A Cryo balloon was used in 7 patients for circular isolation of the ostia. Transcranial Doppler (TCD) was used to detect cerebral MES.

**Results:** Comparing the total number of MES per procedure and per minute of ablation, the irrigated RF tip catheter and the cryo balloon catheter generated significantly less cerebral MES than the conventional RF catheter.

**Conclusions:** PVI procedures causes a significant number of