

Low-grade tumour over the left temporal neocortex and ictal asystole: network and surgical implications

Angelo Russo¹, Stefano Francione², Matteo Martinoni³, Mino Zucchelli³, Angelo Guerra⁴, Gaetano Terrone⁵, Ennio Del Giudice⁵, Giuseppe Gobbi⁶

¹ IRCCS, Istituto delle Scienze Neurologiche di Bologna, UOC Neuropsichiatria dell'età pediatrica, Bologna, Italy

² "Claudio Munari" Epilepsy Surgery Center, Niguarda Hospital, Milano, Italy

³ IRCCS Istituto delle Scienze Neurologiche di Bologna, UOC Neurochirurgia, Bologna, Italy

⁴ IRCCS Istituto delle Scienze Neurologiche di Bologna, U.A. Laboratori di Neurofisiopatologia O.B., Bologna, Italy

⁵ Department of Translational Medical Sciences, Section of Pediatrics, Child Neurology Unit, University of Naples Federico II, Naples, Italy

⁶ IRCCS Istituto delle Scienze Neurologiche di Bologna, Bologna, Italy

- The exact ictal asystole (IA) mechanism is still not fully understood
- The involvement of the central autonomic network or an excessive vagal tone mediated at cortical level are the most implicated pathways
- Diagnosis of IA is very challenging
 - patients may not show pulse disappearance at each seizure
 - At epilepsy onset, there may still be diagnostic pitfalls if we consider that in most IA cases, IA occurs subsequent to temporal lobe epilepsy (TLE)
 - Symptoms and signs of TLE can be very similar to those of syncope since both paroxysmal events may present with pallor, oral automatisms, sweating and fixation

Polygraphic video-EEG long-term monitoring is required

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Does a link exist between IA and sudden unexpected death in epilepsy (SUDEP)?

- In **SUDEP**, the asystole preceding death is always postictal, associated with secondary generalized seizures, preceded by apnoea and followed by electrocerebral shutdown.
- **Ictal asystole** occurs during a focal seizure, is not preceded by apnoea, and appears about 10 seconds before the electrocerebral shutdown

Is a pacemaker useful in patients with IA?

- In our opinion, pacemaker implantation should only be used in patients with long-lasting ictal asystole, drug-resistant epilepsy and those ineligible for surgery

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Should carbamazepine (CBZ) be discontinued in patients with ictal asystole?

- The exact mechanism of action of CBZ is not fully understood, but evidence suggests that it could act as a sodium channel blocker
- CBZ administered for 12–32 months in patients with focal epilepsy has been shown to have no detectable effect on cardiac AV conduction, depolarization and repolarization, or on measures of short- and long-term variation in ECG time intervals
- CBZ can be safely used in the absence of pre-existing cardiac pathologies

For the aforementioned reasons and considering that our patient was a good candidate for epilepsy surgery, CBZ was not discontinued