

Cortical Laminar Necrosis

Chaymae Faraj*, Sara Essetti, Fatima Chait, Yahya El Harras, Nazik Allali, Siham El Haddad and Latifa Chat
Department of Pediatric Radiology, Children's Hospital, Faculty of Medicine and Pharmacy, Mohammed V University, Morocco

***Corresponding authors:** Chaymae Faraj, Department of Pediatric Radiology, Children's Hospital, Faculty of Medicine and Pharmacy, Mohammed V University, Morocco

Received: August 13, 2024

Published: October 23, 2024

Laminar cortical necrosis corresponds to neuronal ischemia associated with a glial reaction and a laminar deposit of lipid-rich macrophages. It occurs following cerebral hypoxia, with damage to the deep layers of the cortex [1].

Cortical laminar necrosis has been linked to a deficiency of oxygen or glucose, which can occur in anoxia, hypoglycemia, status epilepticus, ischemic stroke, and less frequently in immunosuppressive therapy and polychemotherapy [2].

When cortical laminar necrosis is seen on CT imaging, it typically appears as a gyriform linear hyperdensity in the superficial cortex, with the medial occipital lobes and perirolandic areas being the most common locations [2].

On CT, only a high, subtle cortical density is typically visible. Usually appearing after two weeks, the high cortical density

peaks one to two months later and disappears after six months. Generally, cortical laminar necrosis is not easily detected on tomography, however, in the most severe cases of this pathology, far more noticeable images are visible, a situation that has been linked to a poor prognosis [3].

References

1. Berdai AM, Harandou M. Nécrose corticale laminaire compliquant une piqûre de scorpion [Laminar cortical necrosis complicating a scorpion sting]. *Pan Afr Med J*, 2013; 14: 124. doi: 10.11604/pamj.2013.14.124.2274.
2. Samain JL, Haven F, Gille M, et al. Typical CT and MRI features of cortical laminar necrosis. *J Belgian Soc Radiol*, 2011; 94(6): 357.
3. Parada-Duarte O, Guarguati E, Hernández-Mercado L, Granados-Torres S. Necrosis laminar cortical en tomografía computarizada: presentación de caso. *Revista colombiana de radiología*, 2019; 30: 5239-5241.

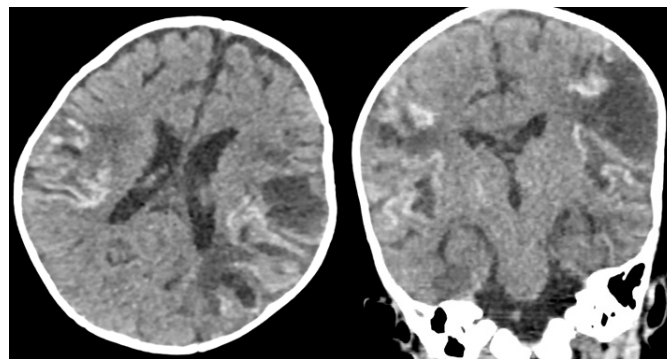


Figure 1: Axial brain CT images without contrast in a 3 years old boy showing a cortical laminar necrosis demonstrated as a gyriform linear cortical hyperdensity.