

Clinical Image

“Tram-Track” In the Brain: A Radiological Feature of Sturge-Weber Syndrome

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Sturge-Weber Syndrome (SWS), a phakomatosis, is a rare neurocutaneous disorder affecting 1 in 20,000 to 50,000 individuals [1]. First described by Sturge in 1879 then by Weber, it is characterized by angiomas of the skin, eye, and meninges [2]. Pathophysiologically, it involves somatic mutations in the GNAQ (9q21) gene leading to vascular dysplasia [3]. Clinically, patients exhibit facial port-wine stains, ocular abnormalities, and neurological symptoms. On CT scans, characteristic findings include leptomeningeal enhancement and gyriform calcifications in the cerebral cortex [4]. These calcifications represent chronic ischemia and gliosis [5]. The image below depicts a 7-year-old patient who presents with recurrent seizures. On the non-contrast cerebral CT scan, in axial sections with parenchymal (A), bone (B) window settings, and sagittal reconstruction (C), it demonstrates the typical appearance of gyriform cortical calcifications in the right parieto-occipital lobe, giving rise to a "tram-track" pattern, associated with slight parenchyma volume loss. The patient was subsequently diagnosed as carrying a mutation in the GNAQ gene, confirming the diagnosis of Sturge-Weber Syndrome (SWS).



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