Symmetrical central tegmental tract (CTT) hyperintense lesions

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A 13 month old with a history of significant pulmonary disease related to reflux, global developmental delay, macrocephaly, and recent decrease in weight gain velocity was referred for further evaluation. MRI demonstrated an area of bilateral symmetrical hyperintensity in the central tegmental tract on T2-weighted and diffusion-weighted images in more than two axial slices (Figs. 1 and 2, *arrows*).

When evaluating a large population of children, the highest percentages of symmetrical CTT alterations in

absence of other abnormalities have been described in association with cerebral palsy (30%), developmental delay (15%) and febrile seizures (15%) [1]. Congenital metabolic disorders, Gorlin syndrome, post-chemotherapy syndrome, hypotonia, and craniosynostosis are less frequently seen, being found in 5% of patients [1]. Degeneration of the white matter tracts, edema and gliosis might account for these abnormalities. Although the pathogenesis of CTT alteration is not clearly understood, radiologists should be familiar with the pathological entities associated with CTT.

Fig. 1 T2-weighted MRI

Fig. 2 Diffusion-weighted MRI

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Reference

1. Yoshida S, Hayakawa K, Yamamoto A et al (2009) Symmetrical central tegmental tract (CTT) hyperintense lesions on magnetic resonance imaging in children. *Eur Radiol* 19:462–469