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Clinical Image

Acute bilirubin encephalopathy in neonate: A clinical image

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A 6-day-old neonate presented with jaundice involving the entire body and serum bilirubin levels of 40 mg/dL. T1W images [Figure 1] showed symmetrical hyperintensities in the globus pallidus (hallmark) and subthalamic nuclei. T2W images were normal with no diffusion restriction [Figure 2].

Magnetic resonance imaging (MRI) is the modality of choice in diagnosing acute bilirubin encephalopathy. Additional regions with T1 hyperintensity include hippocampi, thalami, and dentate nuclei, reflecting broader bilirubin deposition.[1] These findings are most prominent in the neonatal period and may normalize temporarily by 2 months ("blind window") despite ongoing injury.[1] T2 hyperintensities may later emerge in the same regions, indicating chronic damage. Quantitative T1 signal intensity in the globus pallidus has been

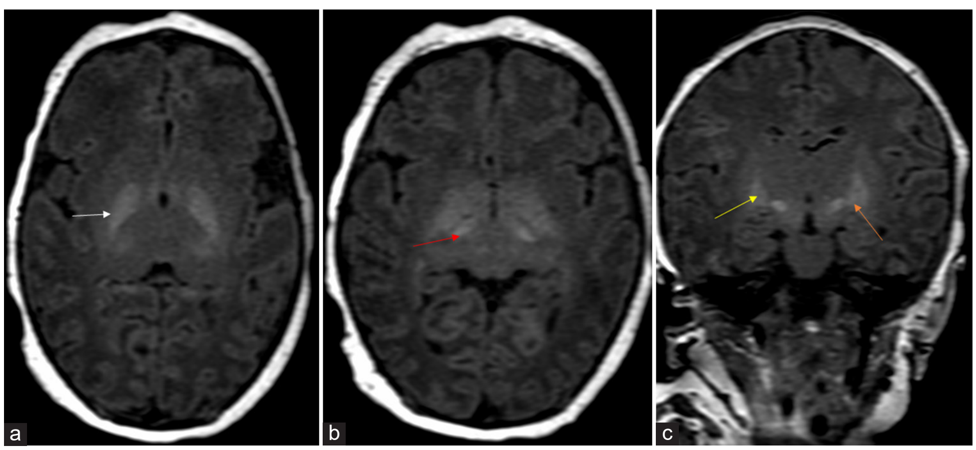

Figure 1: Axial sections of T1 weighted MRI image shows hyperintensities in the (a) bilateral globus pallidus (white arrow), also seen in the (b) subthalamic nuclei (red arrow). (c) Coronal sections of the same T1 weighted images shows involvement of globus pallidus internus (orange arrow) and externus (yellow arrow) on both sides.

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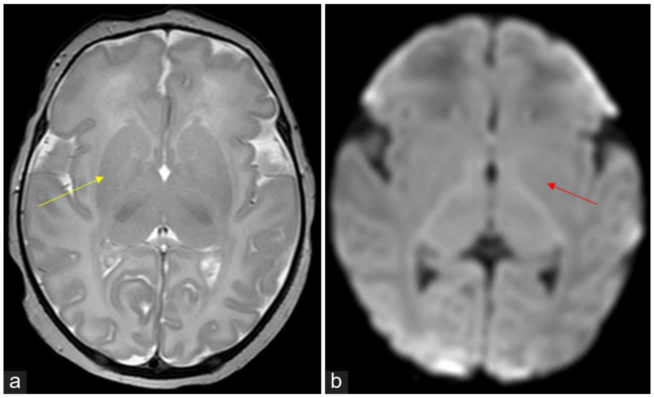

Figure 2: Axial sections of T2 weighted MRI images shows normal signal intensities in the (a) globus pallidus bilaterally (yellow arrow). (b) DWI weighted images show no diffusion restriction (red arrow).

shown to correlate with total serum bilirubin, enhancing diagnostic precision.[2] MRI is thus essential not only for early detection but also for prognostication and treatment planning in at-risk neonates.

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