

# Teaching NeuroImages: Wishbone pattern of iron accumulation

A characteristic imaging sign in GM1 gangliosidosis

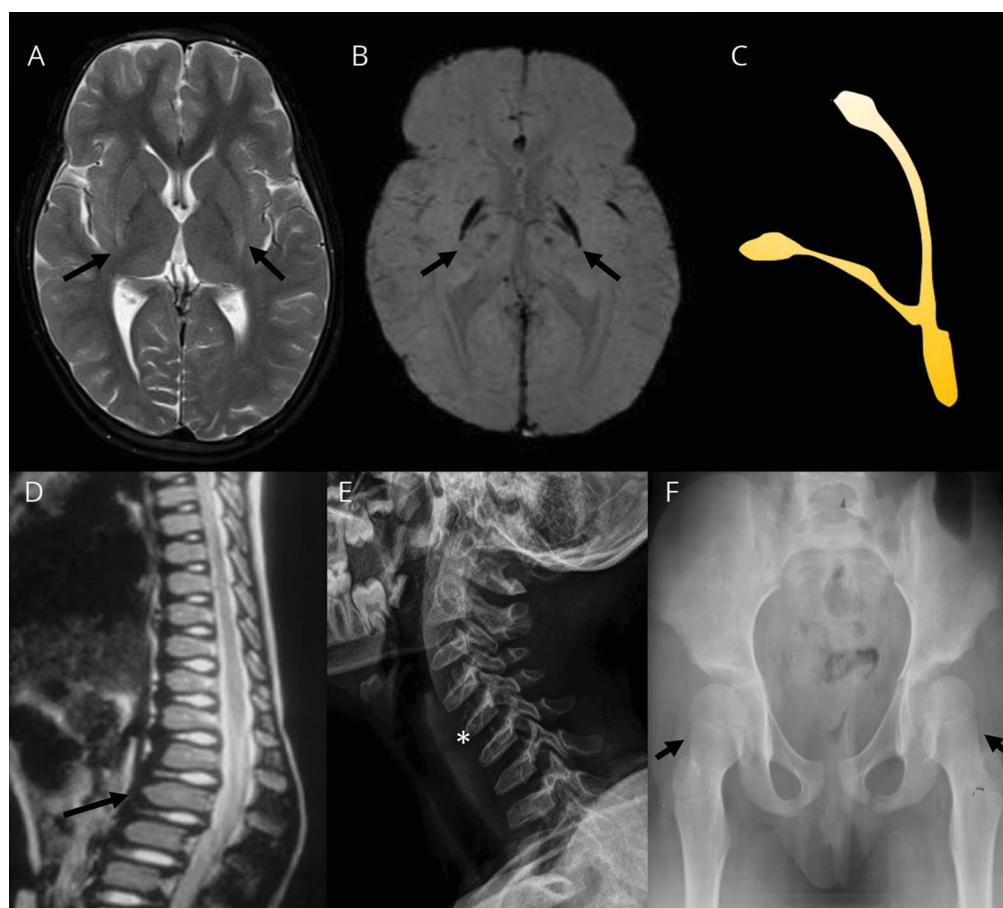
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**Figure** Axial T2-weighted susceptibility-weighted imaging (SWI), animation, and sagittal T2-weighted spine, cervical, and pelvis radiograph



Axial T2-weighted imaging shows (A) posterior putamen hyperintensity and volume loss. SWI (B) and animation (C) shows blooming in globus pallidus in a wishbone pattern. Sagittal T2-weighted (D) spine and (E) cervical radiographs show platyspondyly (asterisk) with beaking of vertebra (arrow). Pelvis radiograph (F) shows bilateral coxa valga.

An 8-year-old girl, with no relevant developmental or family history, presented with progressive orolingual and limb dystonia since 3 years of age. MRI brain showed bilateral posterior putamen volume loss and hyperintensity. Susceptibility-weighted images showed globus pallidus blooming in characteristic wishbone pattern with medial and lateral parts forming the forked ends (figure). MRI spine showed features of dysostosis with platyspondyly and vertebral

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## Appendix Authors

Author name	Location, department	Contribution
<b>Prateek Malik, MD</b>	Radiodiagnosis, Christian Medical College, Vellore	Concept, image interpretation and preparation, write-up of manuscript
<b>Sniya Valsa Sudhakar, DNB</b>	Radiodiagnosis, Christian Medical College, Vellore	Concept, image interpretation and preparation, critical revision
<b>Karthik Muthusamy, MD</b>	Neurology, Christian Medical College, Vellore	Clinical input, critical revision for intellectual content
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beaking.  $\beta$ -Galactosidase assay was low and genetic workup revealed compound heterozygous pathogenic mutation in *GLB1* gene. Combination of putaminal finding and wishbone pattern of iron deposition is highly diagnostic of late onset/type 3 GM1 gangliosidosis<sup>1,2</sup> and helps differentiate from neurodegeneration with brain iron accumulation.

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### Disclosure

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org/N](http://Neurology.org/N) for full disclosures.

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