Treatment of West syndrome with vigabatrin
Reversible MRI signal changes

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A 7-month-old with West syndrome was being treated with vigabatrin and a MRI scan was requested to rule out other possible pathologies. The examination revealed typical abnormalities described in the literature with the use of this drug¹-⁴. Vigabatrin was discontinued and follow-up scan showed signal normalization (Figure). This imaging pattern with the use of vigabatrin is more commonly seen in younger infants (≤12 months), patients with cryptogenic infantile spasms¹ and treatment using relatively high dose of this drug²-³. To explain the changes in the diffusion imaging a recent study analyzed the diffusion tensor, but did not reach a definite conclusion if the changes are attributed to myelin abnormalities or to axonal damage⁴. The imaging pattern described here should be promptly recognized by the neuroradiologist in the appropriate context and the treatment using this drug should be discontinued.

REFERENCES

Figure. Row A shows initial MRI scan with restricted diffusion – high DWI signal (low signal in ADC map not shown) – in the dorsal brain stem, in the globus pallidi and in the thalami. Row B is the corresponding T2 weighted initial scan. Row C shows signal normalization on T2 weighted images three months after discontinuation of vigabatrin (diffusion imaging also normalized, not shown).