False-Positive Findings on Dopamine Transporter SPECT Due to Therapeutic Dextroamphetamine and Amphetamine

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Abstract

Dopamine transporter SPECT is an accurate adjunct to clinical evaluation for Parkinson disease when the diagnosis is difficult. Dopaminergic medications may significantly affect dopamine transporter availability and, thus, uptake of dopamine transporter tracers. A patient had a false-positive dopamine transporter SPECT result while she was taking dextroamphetamine and amphetamine for attention-deficit hyperactivity disorder. The SPECT findings normalized after amphetamine therapy was withheld. An accurate medication history combined with knowledge of drugs that interfere with dopamine transporter imaging is critical to ensure accuracy.