Teaching NeuroImages: Prosopagnosia heralding anti-NMDA receptor encephalitis

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A 23-year-old right-hand-dominant woman presented with 3 weeks of progressive difficulty recognizing faces, including her own, subsequently developing psychosis. Non-contrast CT head and MRI brain with contrast revealed a nonenhancing lesion of the right posterior temporal lobe and fusiform gyrus, with corresponding hypermetabolism on FDG-PET/CT brain (figure). EEG demonstrated right posterior temporal slowing. CSF and serum anti-NMDA receptor (NMDAR) antibodies were positive, with CT abdomen/pelvis revealing ovarian teratoma. Teratoma removal, plasmapheresis, and 1 cycle of rituximab yielded symptom resolution over 1 month. Anti-NMDAR encephalitis rarely presents with prosopagnosia, and in this case, is likely secondary to right fusiform gyrus dysfunction.

Author contributions
Grayson Beecher performed the patient’s clinical assessment, wrote the manuscript, and created the figure. Amanda Nicole Wagner assisted in writing the manuscript and figure legend.

Figure
Neuroimaging findings in anti-NMDA receptor encephalitis presenting with prosopagnosia

(A) CT head reveals right posterior temporal hypodensity. (B) Axial and (C) coronal T2 fluid-attenuated inversion recovery MRI demonstrate high signal in right posterior temporal lobe and fusiform gyrus. (D) Axial and (E) coronal FDG-PET/CT images demonstrate right posterior-inferior temporal hypermetabolism (standardized uptake value 0–18, CIMSNeuro scale, Oasis, Segami Corporation, Columbia, MD).

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Dr. Jonathan Abele reported the FDG-PET/CT imaging findings, provided the figure images, and edited the manuscript. Penelope Smyth assisted in the patient’s clinical assessment and performed a critical revision of the manuscript for intellectual content.

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**References**
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