A case of prosopometamorphopsia restricted to the lower part of face with right medial temporooccipital lobe infarction.

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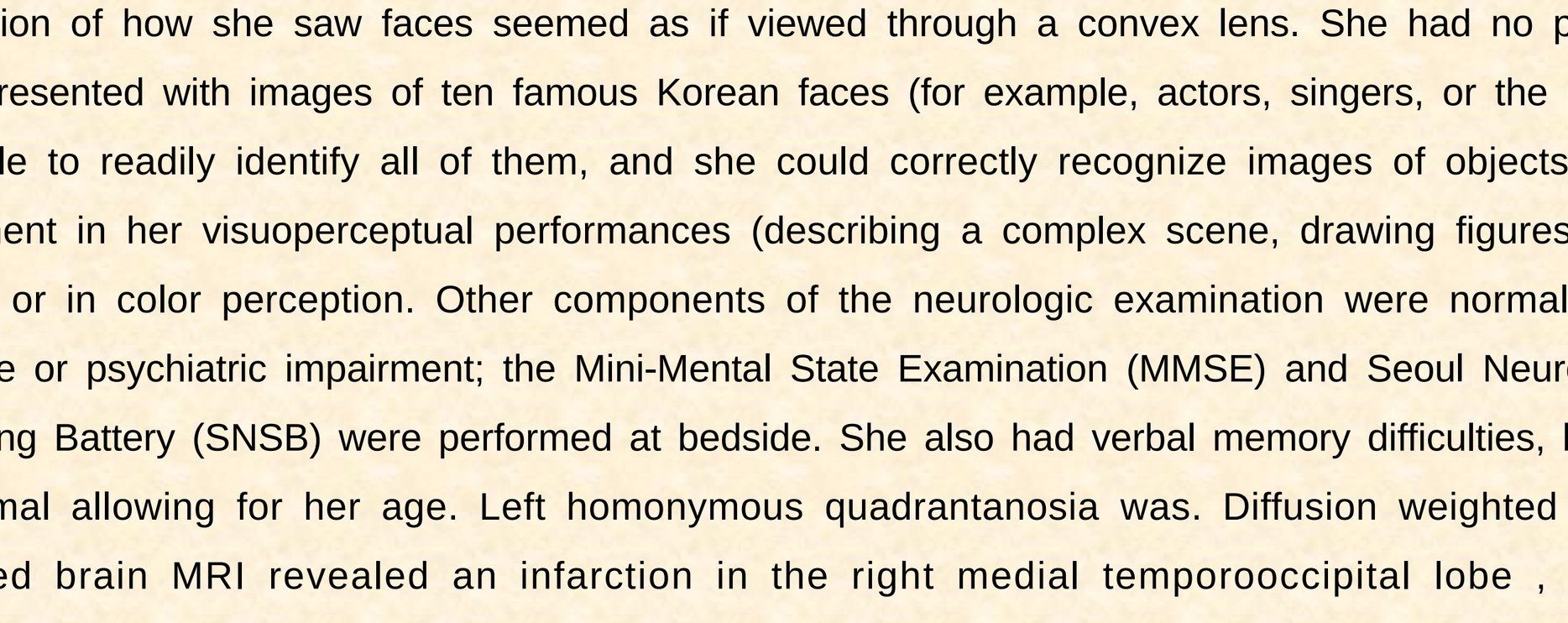
Background & Significance

Metamorphopsia includes a broad spectrum of visual perceptual distortions, such as alteration of perceived object size or, rarely, altered perception of faces, termed prosopometamorphopsia. Prosopagnosia, on the other hand, is a neurological deficit characterized by an inability to recognize faces despite intact intellectual and cognitive function. The fusiform face area is known to play a key role in face perception. We report a patient who complained of metamorphopsia restricted to the center of the face , particularly the lower part of the face(nose and mouth), following a right medial temporooccipital lobe infarction, including the fusiform face area.

Case

A 75-year-old right-handed woman was admitted for a sudden case of nausea, dizziness, and blurred vision. She complained of dimmed vision, and the central part of faces, particularly the nose and mouth, appearing out of shape. Regardless of whether she looked at a familiar or an unknown person, she claimed, "The nose looks very narrow as well as lengthened toward the mouth, which looks small and round in shape.". Her description of how she saw faces seemed as if viewed through a convex lens. She had no prosopagnosia; when presented with images of ten famous Korean faces (for example, actors, singers, or the president) she was able to readily identify all of them, and she could correctly recognize images of objects. She had no impairment in her visuoperceptual performances (describing a complex scene, drawing figures, reading and writing) or in color perception. Other components of the neurologic examination were normal. She had no cognitive or psychiatric impairment; the Mini-Mental State Examination (MMSE) and Seoul Neuropsychological Screening Battery (SNSB) were performed at bedside. She also had verbal memory difficulties, but seemed to be normal allowing for her age. Left homonymous quadrantanosia was. Diffusion weighted MRI and T2-weighted brain MRI revealed an infarction in the right medial temporooccipital lobe , including the parahippocampal gyrus. She was treated with intravenous heparin infusion and coumadization over 10 days, and at the time of discharge, she had recovered to near normalcy in describing the face to some extent.



CONCLUSIONS

In the light of recent empirical evidence, face perception is thought to be mediated by a distributed neural system including all regions of the core and extended systems of which the major entry node is the lateral fusiform gyrus. We speculated that any injury on this pathway could bring about prosopometamorphopsia involving whole or unilateral face perception, or very rarely, such as in our case, distortion restricted to the central area of the face. Furthermore, we hypothesized that there could be topographical correspondences between facial structure and the fusiform face area. Considering that face perception is one of the most highly developed visual skills, the FFA might be likely to include an area specifically responsible for recognizing faces as topographical patterns.