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## Olfactory Hallucinations as the Presenting Symptom in Acute Psychosis

**To the Editor:** We describe the case of a patient who presented to the emergency department with the presenting complaint of olfactory hallucinations. To the best of our knowledge, this is the first published case with olfactory hallucinations as the initial presenting symptom of acute psychosis.

**Case report.** Mr A is a 45-year-old man who was brought to the emergency department when he complained of smelling decomposing bodies in his home, which he related to a family conspiracy to harm him. He reported becoming aware of the odor of decomposing bodies 2 days prior to presentation and that the smell had become increasingly pungent. On the day of presentation, he called the police to investigate; however, they could not identify any such odor or its presumed source. After the police left, the patient wandered in a shopping mall, fearing that his family might harm or kill him. While there, he did not notice the odor.

Paranoia toward his family had developed over the course of the day of presentation; he had previously been able to live comfortably with them. He was unable to entertain any alternative explanations for the odor and denied any previous olfactory disturbances and all other current or previous hallucinatory experiences. He reported tearfulness and low mood, which developed in the context of feeling that his family was conspiring against him. Despite this, he firmly viewed himself as a “happy” person and felt that his low mood was solely attributable to feeling unsafe in his home. He had been hospitalized on 2 separate occasions for the paranoid delusion that his family was conspiring to harm him. The third hospitalization was for major depressive disorder with psychotic features, specifically fears that his mother was attempting to kill him. There was no report of olfactory hallucinations prior to this episode.

The physical examination including neurologic assessment was unremarkable. Laboratory studies including complete blood count, basic metabolic panel, urinalysis, and toxicology screens were all within normal limits. A noncontrast CT head was negative. He was treated with aripiprazole.

Although olfactory hallucinations are generally considered a hallmark of “organic” brain disease<sup>1,2</sup> and are most commonly associated with temporal lobe epilepsy,<sup>3</sup> the temporal sequence of Mr A experiencing the olfactory hallucination for 2 days but only while in his home make seizures unlikely. Furthermore, patients who experience olfactory hallucinations due to central nervous system disorders typically retain insight that the symptom is not reality based. Mr A lacked insight that his olfactory experiences may not be reality based. Within 2 days of the onset of olfactory hallucinations, he had developed a complex delusional system to explain the hallucinations, purporting that his family was conspiring

to dispose of dead bodies and that they intended to harm him. He was able to report a history of psychosis but could not acknowledge that any of his presenting complaints could represent yet another psychotic decompensation.

Although olfactory hallucinations are only rarely encountered in psychiatric practice, their true prevalence remains unknown. The studies that have addressed their occurrence vary widely, showing that 11%–83% of patients with schizophrenia, 4%–18% with bipolar disorder, and 0%–19% with depression report lifetime olfactory hallucinations.<sup>4–6</sup> The case described here highlights that although rare, the presenting complaint of olfactory hallucinations can represent an acute psychotic state. While neurologic or medical causes should be investigated, an acute presentation of isolated olfactory hallucinations may also be the hallmark of a primary psychiatric disorder. Furthermore, this is the first published case of olfactory hallucinations in the absence of either previous or current hallucinations in the other more common (auditory or visual) sensory modalities.<sup>7</sup>

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**Potential conflicts of interest:** None.

**Funding/support:** None.

**Patient consent:** Identifying characteristics have been changed to protect anonymity and ensure confidentiality.

**Published online:** October 19, 2017.

*Prim Care Companion CNS Disord* 2017;19(5):17102098

<https://doi.org/10.4088/PCC.17102098>

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