

VISUALS: Determining the cause of hallucinations in children and adolescents

Caroline Geelan, DO, and Tolga Taneli, MD

Dr. Geelan is Child and Adolescent Attending Psychiatrist, Adult Outpatient Services, Department of Psychiatry, Maimonides Medical Center, Brooklyn, NY. Dr. Taneli is Director and Training Director, Division of Child & Adolescent Psychiatry, UMDNJ-New Jersey Medical School, Newark, NJ.

Disclosure

The authors report no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

Visual hallucinations in children and adolescents can be caused by many conditions other than psychosis. To prevent misdiagnosis and unnecessary antipsychotic use, it is important to rule out other causes of visual hallucinations. The mnemonic **VISUALS** reminds us of common causes.

Visions that are culturally sanctioned occur in non-Western societies—eg, images of fairy-like spirits are accepted and reinforced as part of the Filipino culture—and in several Christian denominations in the United States. Positive cultural connotations may increase the frequency of visual hallucinations as well as produce varied attitudes and emotional reactions to them.¹

Imaginary friends often fulfill a child’s need for a relationship, although even social children may have these “friends.” Children often refer to imaginary friends in conversations and play with them. Usually they are

also children. They may be extensions of people the child admires or be named after characters from stories, movies, or television. Children rarely are able to explain the imaginary friend’s appearance and more than half the time there is no trigger for the appearance of such friends.^{2,3}

Stress and anxiety in preschool children may precipitate the onset of visual or tactile hallucinations. They often happen at night but also can occur when the child is awake. Typical visual hallucinations may include monsters, bugs, pets, or toys.²

Urine drug screens should be conducted for all adolescents and children. Cocaine, methamphetamine, and amphetamines—including high doses of prescribed stimulants—can cause visual hallucinations. Lysergic acid diethylamide (“LSD”), phenycyclidine (“PCP”), 3,4-methylenedioxy-methamphetamine (“ecstasy”), marijuana, nitrous oxide, and mescaline often cause

Table

Medical causes of visual hallucinations in children and adolescents

| Medical condition | Symptoms |
|-----------------------------|---|
| Neurologic | Migraine with aura; migraine coma; familial hemiplegic migraines; temporal or occipital lobe seizures; ictal, postictal, or interictal psychosis; tumors in occipital or temporal lobes |
| Ophthalmologic | Cataracts, retinal diseases, glaucoma |
| Inborn errors of metabolism | Homocysteine remethylation defects; urea cycle disorders; GM2 gangliosidosis; Niemann-Pick disease, type C; alpha-mannosidosis |
| Delirium | Metabolic disturbance, infection, intracranial process |
| Metabolic encephalopathy | Cardiopulmonary insufficiency, uremia, hepatic disease, vitamin deficiencies, inflammatory disease |

Source: References 4,5



Discuss this article at www.facebook.com/CurrentPsychiatry

visual hallucinations, although these substances may not be identified in a routine urine toxicology. Other considerations are withdrawal from benzodiazepines, sedative-hypnotics, or alcohol, and rare adverse reactions to antidepressants, antibiotics, or anticonvulsants.^{4,5}

Age and developmental immaturity may make it difficult for children to distinguish between reality and non-reality, including dreams and shadows in the dark. Underdeveloped communication may make it difficult to interpret what the child is trying to communicate.²

Look into other medical explanations, such as migraines, seizures, tumors, ophthalmologic disease, delirium, or metabolic disorders (*Table*).^{4,5}

Sleep-onset visual hallucinations (hypnagogic) and hallucinations upon awakening (hypnopompic) often are bizarre and dream-like. They may consist of geometric patterns, landscapes, faces, or figures. They mainly occur with narcolepsy but can be seen in insomnia or excessive daytime sleepiness.^{4,5}

References

1. al-Issa I. The illusion of reality or the reality of illusion. Hallucinations and culture. *Br J Psychiatry*. 1995;166(3):368-373.
2. Tsai LY, Champine DJ. Schizophrenia and other psychotic disorders. In: Wiener JM, Dulcan MK, eds. *Textbook of child and adolescent psychiatry*. 3rd ed. Washington, DC: American Psychiatric Publishing, Inc.; 2004:379-409.
3. Gleason TR, Sebanc AM, Hartup WW. Imaginary companions of preschool children. *Dev Psychol*. 2000;36(4):419-428.
4. Cummings JL, Miller BL. Visual hallucinations. Clinical occurrence and use in differential diagnosis. *West J Med*. 1987;146(1):46-51.
5. Teeple RC, Caplan JP, Stern TA. Visual hallucinations: differential diagnosis and treatment. *Prim Care Companion J Clin Psychiatry*. 2009;11(1):26-32.

Stress and anxiety may precipitate the onset of visual or tactile hallucinations in preschoolers

NOW AVAILABLE!

Current
PSYCHIATRY

The CURRENT PSYCHIATRY app

Access CURRENT PSYCHIATRY's peer-reviewed, practical information via your iPhone or iPad, including:

- Evidence-Based Reviews
- Clinical News
- Multimedia
- Interactive Case Reports
- Digital Editions



Available free from the iTunes App Store!

Keyword: CURRENT PSYCHIATRY

