Hallucinogen Persisting Perception Disorder

Synonyms: HPPD, ‘flashbacks’

This condition occurs in those who have previously taken hallucinogenic recreational drugs, usually on a number of occasions.\[1\]

After the drug-related mind alteration has finished they may experience visual symptoms akin to the original hallucinogenic experience. The term flashback, although used synonymously by some, is in fact a discrete but ill-defined phenomenon. The term has been used heterogeneously over the years in the literature and hence is felt to be useless as a defining term by some authors.\[2\] It describes a short-term transient, episodic, non-disturbing, reversible and benign re-experiencing of visual symptoms originally encountered during a drug experience.

Hallucinogen persisting perception disorder (HPPD), by contrast, is a persistent, pervasive, long-term, dysphoric and distressing condition. It may be irreversible or persist for months or years. Its effects are clearly non-benign and accompanied by a sense of dysphoria.\[3\] The symptoms must cause distress or social, occupational or other impairment and not be due to an underlying medical condition. Equally, the symptoms should not be due to another mental disorder such as dementia, delirium or schizophrenia and not be associated with waking or falling to sleep when hypnopompic or hypnagogic hallucinations are a more likely cause.

Epidemiology

It is exceedingly uncommon on a population basis and probably still extremely rare in the population that has taken hallucinogenic drugs. No reliable prevalence data are available. However, a worrying increase has been reported in the use of hallucinogens in UK dance drug users.\[4\]

Risk factors

Previous use of an hallucinogenic or similar drug. There are case reports of the symptoms occurring after taking a variety of psychoactive drugs, as well as the classical hallucinogens.\[5, 6\] It appears unusual for the condition to follow first exposure to a drug. Other purported risk factors are unproven, due to the small number of cases studied and lack of comparison with suitable control populations.\[2\]

Presentation\[2, 7\]

Symptoms

- Visual hallucinations in the form of trailing colours.
- The sensation that something is moving in the peripheral field of vision although there is nothing there.
- Trailing phenomena - moving objects leave trails or after-images.
- Positive after-images (an image that retains the original colour).
- Colour flashes when lighting is low.
- Colours of increased intensity.
- Haloes surrounding objects.
- Macropsia and micropsia (objects appear respectively larger or smaller than normal).
Differential diagnosis \[2, 7\]

- Persisting intoxication with hallucinogen (do not diagnose until an appreciable period has passed and acute effects are definitely curtailed).
- Functional brain disorder, eg schizophrenia.
- Organic brain disorder, eg brain tumour, delirium, dementia, visual hallucination due to epileptic activity.
- Visual hallucinations due to another drug and/or associated medical condition, eg Parkinson’s disease and L-dopa.
- Factitious illness.
- Acute withdrawal from alcohol or drugs (take full substance use history).
- Ocular disease causing perceptual disturbance.
- Hypnagogic or hypnapompic hallucinations.

Investigations

There are no useful confirmatory tests. Screening blood tests, cerebral imaging and electroencephalography (EEG) may be used to exclude other causes of the symptoms.

Management

Case reports of successful management with neuroleptics, anticonvulsants, benzodiazepines, selective serotonin reuptake inhibitors (SSRIs) and clonidine. \[8, 9, 10\] No randomised controlled trial data are available to support their use. \[2\] Referral to a specialist centre experienced in dealing with the problem is advisable.

Prognosis \[7\]

Symptoms should settle over a period of months and do seem to respond to pharmacotherapy in the majority of cases. However, some patients may experience distressing symptoms that last for years or are irreversible.

Prevention \[7\]

Avoidance of hallucinogenic and other recreational drugs associated with the condition. Failing that, avoidance of excessive or frequently repeated use of these drugs.

Further reading & references

1. Diagnostic criteria for 292.89; Hallucinogen Persisting Perception Disorder (Flashbacks), behavenet.com 2008
7. HPPD FAQ, erowid.org 2009

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