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The cultural context of visual hallucinations

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Abstract

Visual hallucinations (VH) are a cardinal neuropsychiatric symptom and often have important diagnostic implications. The interpretation of VH is influenced by the patient's social and cultural milieu, but the impact of socio-cultural factors on the interpretation, presentation and detection of VH has been little studied. When patients exhibit VH and other neuropsychiatric phenomena, appropriate sensitivity to the role of cultural factors is an important determinant of the success of the medical consultation. We discuss this issue using three illustrative cases.

Visual hallucinations (VH) are a common symptom of organic brain disease. While VH are a hallmark of common neurodegenerative disorders such as dementia with Lewy bodies (DLB) and Parkinson's disease dementia (PDD)¹, the patient with VH may present to doctors in any branch of medicine, as intercurrent systemic illness is a potent provoking factor in the elderly and in the presence of reduced cerebral reserve. Hallucinations are an important cause of disability and have been linked with an accelerated progression of dementia and early institutionalization², and there are substantial risks of morbidity, misdiagnosis and inappropriate management if they go unrecognised. While the clinical phenomenology, diagnostic value and neurobiology of VH have attracted much interest^{3,4,5}, less attention has been paid to the role of cultural and social factors in the assessment of patients who experience them^{6,7,8,9}. We recently encountered three patients who highlight this issue.

Case descriptions

Case 1

A 63 year-old, Afro-Caribbean man described seeing ghosts and spirits including that of his deceased mother, both at work and at home, and would sometimes talk to them. This was initially interpreted as a 'culturally specific phenomenon' by the patient's family and doctors. Over the course of eighteen months, these experiences became more frequent and intense and his family complained of his declining memory and inability to perform household tasks such as preparing meals. Later, delusional, persecutory ideas emerged in the context of a global dementia confirmed via neuropsychometry. A clinical diagnosis of DLB was made.

Case 2

A 75 year-old, retired clergyman with a ten year history of idiopathic Parkinson's disease experienced 'visions' of deceased relatives and parishioners. He was not distressed by the

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visions, and commented that such experiences were natural in a person with his occupational background. His wife considered him to be a very spiritual person and so did not initially find his experiences unusual or concerning. Subsequently he complained of declining memory, for which he was investigated. Neither the patient nor his wife volunteered the history of 'visions' until the issue of unusual experiences was taken up in the course of cognitive assessment. There was evidence of executive dysfunction and poor episodic memory on neuropsychometry. A volumetric MRI study of the brain demonstrated mild small vessel disease (not considered sufficient for a diagnosis of vascular dementia) and no regional atrophy. A clinical diagnosis of PDD was made.

Case 3

A 69 year-old woman with a twelve year history of parkinsonism complained that her house was 'riddled with apparitions and spirits', including people in mediaeval costumes, and that she felt surrounded by people for most of the day. She was not distressed by these visitations. The patient and her husband remarked that she had an interest in the spirit world and bodies from 'the other side' predating her illness, and that they felt it made her susceptible to such experiences. Further, the patient justified her belief in the existence of a parallel spirit world by reference to contemporary scientific theories such as quantum mechanics. When she was initially assessed, the patient's description of the visitations was considered atypical of VH in DLB – PDD and the possibility of levodopa-induced VH was raised. On subsequent cognitive examination there was evidence of bradyphrenia and neuropsychometry revealed significant cognitive impairment, primarily implicating anterior and subcortical regions. A diagnosis of PDD was made.

Discussion

These three cases illustrate the potential for interaction between cultural factors and the clinical phenomenology of VH. In each case, the patient's cultural milieu (ethnic or religious) led to their experiences being interpreted or rationalised as apparitions or spirits, and these beliefs were supported by the patient's caregivers. These cases collectively illustrate some of the ways in which such socio-cultural effects can lead to VH (and other neuropsychiatric phenomena) being misinterpreted or overlooked by doctors. Case 1 suggests that culturally-based explanations of abnormal experiences should not be accepted uncritically and may bear more detailed enquiry. Case 2 illustrates how socio-cultural factors may make patients and carers less likely to describe unusual experiences during the consultation. Case 3 shows that the notion of what is 'typical' may need to be adapted to take account of an unusual socio-cultural milieu (the patient's description of VH may, for example, convey an unpleasant or sinister aura that the doctor associates with particular pathological processes, such as depression or drug effects).

Characteristics of VH in a representative spectrum of disorders are summarised in Table 1. For each disorder in the Table, we estimate the relative potential for modulation of the content of VH by social and cultural factors. The content of VH has some value in determining the location and nature of the underlying tissue pathology⁴ (see Table 1). Complex VH in DLB are more strongly associated with the distribution of Lewy bodies within the parahippocampal and inferior temporal cortices than with the duration and severity of cognitive symptoms⁵. However, while VH may be more commonly described in some cultural contexts than others¹⁰, and certain persecutory or religious themes have been linked with particular socio-cultural groups⁹, it is not clear to what extent social, cultural and environmental influences affect the phenomenology and frequency of reports of VH. Such factors are likely to modify the interpretation and description of VH by patients and carers^{6,7,8}. In cases where the content of the VH is congruent with the patient's cultural background and belief system, VH may be culturally sanctioned and therefore not

recognised as harbingers of brain disease. This may in turn influence the decision to seek medical care, the way in which clinical symptoms are described, and the attitude of patients and carers to medical advice, particularly with respect to treatment adherence. It is noteworthy that in Cases 1 and 2 here, assessment of cognitive function was undertaken only when memory impairment supervened. On the other hand, certain themes or features of VH arising from organic brain disease seem to cut across cultural boundaries. Such features may serve as tell-tale signs to the presence of the disease in question: examples would include the sometimes fleeting VH of small animals that emerge in DLB, or the vivid and detailed VH of people (often in miniature - 'Lilliputian' – and/or wearing bright costumes) in peduncular hallucinosis (see Table 1). Socio-cultural factors are more likely to operate in the case of complex VH influenced by the individual's personal experience (Table 1).

Sensitivity to cultural differences is particularly relevant in caring for the elderly and patients with chronic, stigmatising illnesses such as the dementias, and in the assessment and management of behavioural and psychiatric manifestations including VH. The social stigma attached to psychiatric phenomena of all kinds remains substantial¹¹ and patients and carers are even less likely to describe such experiences if the cultural climate is perceived as unsympathetic or ignorant. Although each of the patients in this series was eventually diagnosed with DLB - PDD, VH may arise in a variety of clinical contexts and with a range of disease pathologies^{2,3,7} (see Table 1). However, doctors should be particularly sensitive to the possibility of undisclosed or rationalised VH in diseases such as DLB – PDD in which abnormal percepts are a cardinal feature. The importance of awareness of socio-cultural factors has been highlighted in cross-cultural curricula¹² directed chiefly at primary health care delivery, but this issue is no less relevant to doctors in other branches of medicine. Indeed, the potential for misinterpretation may be relatively greater in subspecialty practice where a focus on disease mechanisms may deemphasise the role of social and cultural factors in the patient's illness, particularly if these factors are not obvious, as in Cases 2 and 3 here. This may in turn pose difficulties both for early diagnosis and for sensitive and effective management of patients from different social and cultural backgrounds.

The potential for misinterpretation of patients' experiences extends well beyond the realm of obvious differences in the ethnic background of doctor and patient. Certain cultural constructs, such as a belief in spirits, transcend ethnic, socioeconomic and religious boundaries, and sensitivity to such transcultural beliefs is particularly important when interpreting patients' own interpretations of their experiences. In particular, the increasing influence and popularity of non-traditional belief systems such as the 'New Age' movement in western societies makes it more likely that patients may hold beliefs that are not predicted on ethnic, educational or demographic grounds (Case 3 here). Furthermore, some beliefs are idiosyncratic to the individual or to a very restricted social or occupational group (Case 2 here). Hallucinations are a salient example of an entire gamut of neuropsychiatric phenomena in which social and cultural factors can powerfully determine the success or failure of the medical consultation, and these factors will become increasingly relevant as our society becomes globalised.

Conclusions/Learning Points

- Visual hallucinations are an important feature of a number of common disease states and may present to a variety of specialties.
- Socio-cultural factors may influence patients' and carers' interpretation of these phenomena and, therefore, their consulting behaviour.
- Sensitivity to cultural context is important for the detection and correct interpretation of hallucinatory experiences by medical professionals.

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Table 1
Characteristics of visual hallucinations in selected diseases

Disease process	Phenomenology	Associated features	Possible mechanism(s)	Contribution of socio-cultural factors?
Occipital lobe pathology (stroke, seizures)	Simple: elementary objects, repeating patterns, stereotyped, often lateralised (field defect)	Hemianopia, may have other posterior cerebral or upper brainstem signs	Abnormal release of cortical activity or seizure activity	-
Migraine	Usually simple: elementary objects, repeating patterns (e.g. 'fortification spectra'), evolving in stereotyped fashion; occasionally complex	Visual scotoma or hemianopia, may have other visual distortions (e.g. 'Alice-in-Wonderland' syndrome), neurological deficits, headache	Altered cortical excitability	-
Delirium (acute brain syndrome) *	Variable: often insects or vermin, mobile, often ill-defined, especially in low light, often threatening	Heightened or reduced awareness / motor activity, disorientation, carphology (picking at bedclothes), formication (crawling sensations)	Release of ascending controls on cerebral cortex, impaired attention	±
Midbrain pathology ('peduncular hallucinations')	Often complex: vivid, often tiny (Lilliputian) figures, scenes, often diurnal variation	May have evidence of oculomotor or other upper brainstem pathology, somnolence, sometimes hallucinations in other sensory modalities	Release of ascending controls on cerebral cortex	+
Visual loss (Charles Bonnet syndrome)	Often complex: vivid, unfamiliar people (often children), non-threatening; may have simple patterns	Usually evidence of acquired peripheral visual pathology; especially elderly	Deafferentation of visual cortex	+
Lewy body dementia / Parkinson's disease dementia	Often complex: vivid, people and/ or small animals, often transient or 'emerge' from visual environment (objects, patterns) in low light, extracampine (sense of a presence beyond the field of vision), non-threatening	Cognitive impairment, parkinsonism, fluctuations	Deficiency of cortical acetylcholine	+
Temporal lobe epilepsy	Complex: vivid, complex scenes, discrete episodes	May have hallucinations in other sensory modalities, altered awareness, déjà vu, automatisms, overt seizures	Seizure activity, may be reactivation of old memories	++
Psychosis	Complex: vivid and often unpleasant, persecutory, bizarre	Auditory hallucinations, delusions, thought disorder	Uncertain: ?altered gating of external sensory inputs vs internally generated imagery	++

Hallucination syndromes are ordered here according to increasing complexity and proposed potential for modulation by social and cultural factors. The Table does not include visual hallucinations in otherwise healthy people under certain circumstances, e.g. sleep onset (hypnagogic), sensory / sleep deprivation, grief reactions; such hallucinations are also likely to be modulated by socio-cultural factors and recent experience

* including drug intoxications