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Autoscopy, Mental Handicap and Epilepsy

A Case Report

A case of autoscopy in a 43-year-old epileptic and mentally handicapped woman is described. The possible significance of this phenomenon to the patient is discussed.

Autoscopy is an uncommon psychiatric symptom. It is defined as "the hallucinatory perception of one's own body image, projected into the external visual space" (Lukianowicz, 1958). As the term 'autoscopy' implies a purely hallucinatory experience, the German synonym *Doppelgänger* is preferred by many authors. *Doppelgänger* is a phenomenon of an experience of a direct encounter with oneself, in which there is involvement of true perception, either in the form of hallucination or illusion; more importantly, the perceived figure shares the same personality and identity (Maak & Mullen, 1983). Autoscopy has been associated with a variety of organic brain pathologies, as well as functional mental states. To our knowledge, the present case is the first to be described in a patient with mental handicap.

Case report

Judith was born in 1943, as the result of a normal pregnancy and labour. The aetiology of her primary handicap is unknown. There is no known family history of mental handicap, epilepsy, or mental disorder. Judith was first suspected to be mentally handicapped at the age of 2½ years, on account of her delayed milestones. As a child she was noted to be restless, overactive and prone to temper-tantrums. She developed measles and pertussis during infancy, and convulsions at the age of nine months. At two years of age she developed major seizures, which have since continued. At the age of five years, Judith began her institutional career, through a variety of settings. She first came under our care in 1979.

Mental state

Judith is a lady of severe mental handicap. On the Vineland Adaptive Behaviour Scale she has a Behaviour Composite Score of 24 (population mean 100, s.d. 15): her score is below the first national centile, and gives an age equivalent of 4 years 10 months. Scores within the domain of communication give her an age equivalent of 4 years 1 month overall, with receptor and expressive communication skills of 3 years 11 months and 3 years 8 months respectively. She has a full complement of basic self-care skills. She is, however, unable to read or write. She is unable to understand the concept of numbers or money.

She is gauche in her interpersonal skills and shows rather disinhibited behaviours. She is frequently uncooperative and physically aggressive, hitting out at other residents for no very apparent reason, although such behaviour appears to be worse during the pre-ictal period. She has a highly sensitive personality which makes it extremely difficult for her to accept any criticism, whether real or imaginary, with impunity. She is very active and restless, being unable to sit still for more than a few seconds before getting up, pushing past, and pacing about. Her attention span is exceedingly short. Her mood is appropriate and responsive, with incongruity. She is able to speak with moderate clarity, but uses only short sentences. She is only able to express simple and concrete ideas. There is, however, no evidence of formal thought disorder or Schneiderian first rank symptoms. By her behaviour and speech, she does not appear to experience auditory hallucinations. The content of her speech has remained bizarre and unchanged over the eight years that she has been under our care.

She indicates that there is somebody sitting on her right shoulder, who has been invested, over time, with the name of Toffee Apple. It becomes apparent, however, that the figure on her right shoulder is, in fact, herself. On these occasions she speaks of herself in the third person. For example, after being admonished by the ward staff for her behaviour, she says "Judy has been naughty today"; she then turns her head to look at her right shoulder, and smacks her right shoulder with her left hand, as if scolding the figure perceived to be sitting on her right shoulder. When Judith is criticised, she takes to blaming "Toffee Apple" excessively. On being placed on a reducing diet, she turns to her right shoulder and says "Toffee Apple is too bloody fat." This perceived image does not appear to be present continuously; she does not appear to be able to summon it at will. Staff awareness of the existence of Toffee Apple dates back five years. Its appearance has been unaffected by the administration of chlorpromazine, haloperidol, or pimozide, or by improved control of her epileptic seizures.

Physical state

Judith's general health is good. However, she suffers from infrequent temporal lobe seizures with frequent secondary generalisation. Her only medication is sodium valproate (600 mg *t.d.s.*) and carbamazepine (200 mg *t.d.s.*). She is a lady of short stature, but demonstrates no dysmorphism. Head shape and circumference are normal. No abnormalities are detected in her cardiovascular system, chest, or abdomen. Her behaviour has constantly precluded examination of the optic fundi; other cranial nerves are intact. A marked extrapyramidal tremor of her upper limbs is present. Muscle tone, power and reflexes in all four limbs are normal, with

flexor plantar responses. Palmomental and glabellar tap signs are absent.

The following investigations are all normal: full blood count, differential count and indices; urea, creatinine and electrolytes; calcium, phosphate, alkaline phosphatase; liver function tests; vitamin B_{12}; red cell folic acid; and ward urine tests for glucose, protein and blood. Serum valproate and carbamazepine levels are within the therapeutic range. A CT head scan shows no abnormality.

The EEG is abnormal. Focal epileptic discharges are present in the right anterior quadrant; in addition, there is a bilateral interseizure discharge more prominent over the right frontal region. The EEG appearances are considered to be consistent with epilepsy arising in the right fronto-temporal region.

Discussion

The recognition of psychic phenomena in patients with mental handicap presents difficulties arising as much from the patient's communication problems as from deficits in the patient's understanding of the phenomena. We believe, however, that this case represents the first reported instance of autoscopic phenomena in a patient with mental handicap.

Transient autoscopic phenomena can occur in normal people during conditions of overwhelming fear, severe anxiety, and toxic states, and can also occur as hypnagogic or hypnopompic hallucinations (Sivadon, 1937; Lhermitte *et al*, 1942; Hecaen & Bachet, 1945; Lhermitte, 1951; Faguet, 1979).

We believe that our patient experiences a hallucinatory perception of herself, and that this perception has all the characteristics of a normal perception, and inhabits objective space. This perception does not appear to be continuously present, but arises particularly at times of emotional stress, such as when she feels she is being criticised, blamed, or chastised. The quality of this experience has not changed over the past five years. The perception is unrelated temporally to ictal phenomena. Its quality and frequency of appearance have not been altered by the administration of psychotropic medication.

Damas Mora *et al* (1980) classified autoscopy according to its presumed aetiology: whether associated with brain pathology, psychiatric illness, or idiopathic. On the other hand, according to phenomenology, Sollier (1903) classified autoscopy in (1) internal form, (2) negative external form, and (3) positive external form, the last being subdivided into (a) specular form, (b) deuteroscopic form, and (c) cenesthesic form.

Several authors (Lhermitte, 1951; Hecaen and De Ajuriaguerra, 1952; Lippman, 1953; Dewhurst & Pearson, 1955; Jasper, 1963; Salama, 1981) have associated autoscopy with a variety of organic brain disorders, including general paresis, epilepsy, migraine, encephalitis, brain trauma, alcohol, fatigue, and pyrexial illnesses, as well as psychiatric disorders including schizophrenia, depression, hysteria, and anxiety. Alonso-Fernandez (1972, 1976) associated autoscopy with depersonalisation syndromes. Lhermitte pointed out that many writers who experienced and wrote about autoscopy in their novels themselves suffered from some organic disorders. Dostoievsky suffered from epilepsy, Hoffman and De Maupassant died of general paresis and Poe suffered from both epilepsy and manic–depressive disease.

Menninger-Lerchenthal (1935) drew attention to the close association of autoscopy with seizures originating from a focus in the right parietal lobe. However, Hecaen & Ajuriaguerra (1952) have challenged this opinion, having discovered focal lesions in the left cerebral hemisphere in six out of ten cases studied. They emphasised the importance of the involvement of parieto-occipital lesions, as well as lesions of the basal structures. Hecaen & Green (1957) and Leischner (1961), on the other hand, have shown the temporal and parietal lobes to be affected in patients with autoscopic symptoms. Lopez-Ibor (1957) hypothesised the association of thalamo-cortical circuit with the involvement of parietal cortex in the phenomenon of *Doppelgänger*. It is significant, however, that our patient's EEG shows evidence of focal pathology in the fronto-temporal region of the right cerebral hemisphere.

Autoscopy has been associated with a variety of functional psychiatric disorders. Maack & Mullen (1983) discussed a man who, having a previous history of psychotic illness, developed autoscopy following his father's death. Craske & Sacks (1969) have described multiple autoscopic images occurring as a puerperal psychosis. Staudenmaier (1912) experienced autoscopic phenomena during the course of his schizophrenia. Our patient, however, shows no evidence of functional psychosis.

Todd & Dewhurst (1955) adopted a more holistic view, and described the characteristics often associated with the phenomenon. These included narcissistic personality traits, unusually developed visual imagery, wish-fulfilment, and latent fear. Anxiety and strong affective disturbances are associated with this experience (Lhermitte, 1951).

The strong temporal relationship between our patient's demonstration of the existence of her abnormal perception and of her being exposed to situations which induce anxiety in her, suggests to us the importance of psychodynamic factors in its development. One explanation of this phenomenon

is that it merely represents depersonalisation. Alternatively, as the autoscopic phenomenon is most apparent when our patient is confronted with real or imagined criticism, it seems likely that she is able to displace anxiety, which she might otherwise find overwhelming, on to her autoscopic image, thereby allowing her to cope with the anxiety. Our patient has a very sensitive, perhaps narcissistic, personality which makes it hard for her to accept any real or perceived criticism.

The life experience of many mentally handicapped people is seriously circumscribed. If, in addition, one's understanding of the world is impoverished, the world is likely to be viewed as a hostile place which generates considerable anxiety. Anxiety and anger are among the commoner responses to external stresses to be displayed by those with mental handicap. Developmentally delayed children may have a history of describing imaginary companions with whom they carry on conversations. Similarly, people with specific developmental impairments, such as Asperger's syndrome or other forms of pervasive developmental disorder, have ritualistic preoccupations with imaginary companions. This may, in part, be explained by a difficulty in maturity between concrete and abstract forms of thinking. In our patient's instance, her imaginary companion is herself.

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