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Clonal pluralization, as an interpretative delusion after a hallucinatory form of autoscopy

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ABSTRACT – *Background and Objectives*: Delusional misidentification syndromes are widely present in several major psychiatric and neurological disorders. After reviewing the recent terminology and psychopathology of the double phenomenon in the literature, the authors present a case of a patient with dementia, vascular type, where clonal pluralization of the Self appeared as a secondary, interpretative delusion after a hallucinatory type of autoscopic experience.

Methods: Review of the literature and a case report.

Results: In the presented case the linear evolution and the interpretative aspect of the arising misidentification phenomena are predominant. The differential diagnosis and the distinctive characteristics of the presented case from other potential delusional misidentification syndromes are also discussed. Brain lesions and neuropsychological impairments seem necessary, but the full development of these syndromes depends upon the individual's responses to his or her defects as much as the defects themselves.

Conclusions: Overviewing the broad spectrum of concepts on delusional misidentification syndromes, the authors emphasize the importance of those approaches which enhance the disappearance of the classical organic-functional dichotomy on the double phenomenon and which try to clarify the neurocognitive background of delusional misidentifications.

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Introduction

Delusional misidentification syndromes (DMS) –characterized by a belief in duplicates and replacements– can occur in several organic and major psychiatric disorders[1-3]. Recently, approaching an agreement on a clarifying classification of the misidentification phenomena, several authors[4-6] conceptualise two essentially different types of delusional misidentification syndromes, as the *Capgras type* (*misidentificational disturbance with replacements*) and the *clonal pluralization type* (*pluralizational delusion with duplicates*).

In the Capgras type (including *Capgras syndrome*, *Frégoli syndrome*, *intermetamorphosis* and the *syndrome of subjective doubles*)[7-9] the significant issue is the misidentification of a real person. In the first three classic forms the patients' delusion exclusively refer to other people, while in the case of 'subjective double' patients misidentify another existing person, as if he or she was his own self. Unlike in the Capgras type of DMSs, in the clonal pluralization type including *clonal pluralization of a person* (CPP) and *clonal pluralization of the Self* (CPS) the basic feature is the delusional view on one's existing in plural numbers[4-6].

The phenomenon of *clonal pluralization* (CP) is based on the classical term of *reduplicative paramnesia* (RP), first described by Arnold Pick in 1903[10]. In the original description RP referred to delusions of reduplication of a certain familiar place or person, later however, RP was often used in several meanings in the related literature. Recently its definition was narrowed down to the misidentification of places occuring in certain organic cerebral disorders, therefore it has been discussed as a neurological syndrome. Murai *et al.*[4] have published the first case describing the delusional view on reduplication in functional psychosis and proposed the term clonal pluralization. When pluralization refers to the patient's own identity, the term clonal pluralization of the Self is used[5].

Concerning the complex psychopathology of the 'double' phenomenon, *autoscopy* should be mentioned, which is mainly defined as a perceptional disturbance, involving the boundaries of the Self[11-13]. During autoscopic experience subjects see an image of themselves in the external space, which is viewed from within their own physical body. Several types of autoscopy have been described, like the *depersonalizational* (feel one's own body), the *hallucinatory* (see one's own body), and the *delusional* (know one's own body) forms[14].

Methods

We reviewed the recent terminology and psychopathology of the double phenomenon in the literature. We present a case of a patient with dementia, vascular type, where clonal pluralization of the Self appeared as a secondary, interpretative delusion after a hallucinatory type of autoscopic experience. We also discuss the differential diagnosis and the distinctive characteristics of the presented case from other potential delusional misidentification syndromes.

Case report

The 86-year-old patient was referred to our department by his general practitioner because he was talking continuously to his

so-called ‘twin’. He had no history of previous psychiatric treatment, and there were no psychiatric disorders in his family. He had been a high school teacher for 40 years. Since his wife’s death he has been living alone. According to his children, the patient’s behaviour has changed during the few weeks before admission. He was talking to himself and reported about his ‘twin brother’, he got excited apparently without reason. The patient’s sensorium remained clear, he was oriented in time and place, and amnesia could not be detected for the events described.

During a detailed exploration, the patient reported with intense emotions that his ‘twin brother’ he had not ever known about before, stands continuously by him, which he considered as a miracle to be investigated by a special medical staff. He stated that he had seen this ‘twin’ a few weeks ago on an excursion, which was organised by the high school he had been employed previously. In the beginning he saw and talked to him in the hostel they were lodged at. First, the patient was surprised by the astonishing similarity in their physical appearance: the twin looked exactly identical to him, he had the same voice, he wore the same clothing. Later on he started to think that this man could not be else than his own twin brother, and believed that his ‘twin’ used the same first and last name. He firmly stated during his exploration that he felt, he saw, he heard and said the same as his ‘twin brother’ did in the next room to him. He did several trials to prove his unusual experience. They solved cross-words independently and found exactly the same solutions as the other. He asked the ‘twin’ to enumerate the paintings on his wall while the ‘twin’ was outdoor - and the twin could do it as well.

After his admission risperidone 2 mg/day was started. Two days later he developed the idea that he and his twin got fusioned in one person and they were two personalities in one body. By this time, he modified his original experience in the followings: ‘an announcement came out in the local newspaper where they were searching for a twin brother, a son of my father. Due to this article a certain secret group made the ‘twin’ show up and organised the meeting between me and my twin on that excursion’.

During his clinical examination the patient’s sensorium was vigil and clear, he was oriented in time and place, no attention deficit or agnosia was seen. Perceptual disturbances could not be explored and his behaviour did not refer to them. Under the influence of his delusional beliefs he was still excited and anxious. Long-term memory deficits and disturbances of abstract thinking could be seen as symptoms of cognitive decline.

Detailed physical and laboratory investigations, electroencephalography (EEG) and computerised tomography (CT) were performed. The CT scan displayed abnormalities corresponding to vascular encephalopathy. The vascular lesions affected mainly the mediotemporal gyri bilaterally and the left capsula interna. EEG basic diagram was well organized without epileptic discharges. Laboratory results were normal. In the Mini Mental State Examination (MMSE) the patient scored 23/30, in the Addenbrooke’s Cognitive Examination (ACE) he scored 76/100 points, the VL/OM (verbal fluency +language/orientation+memory) ratio was 28/7. The loss of points was mainly in the sub-domains of memory and verbal fluency, whereas he scored well in orientation, attention, language and visuo-spatial subdomains of the testbattery.

Although the patient was treated continuously with a low dose of second-generation antipsychotic medication (risperidone 2 mg/day), the delusional belief on the identi-

cal 'twin' was resistant to therapeutic interventions throughout his 12 days of hospitalization. At his discharge he talked to himself as to the delusional twin less frequently, he was not agitated any more, and his behaviour became conventional.

Discussion

In our present case clonal pluralization of the Self (pluralization type of DMS) appeared as an interpretation of an autoscopic experience. Considering the widely used classification of delusive misidentification syndromes by Weinstein[2], the majority of the common features that link to DMSs are present in our case as follows. *Duplication*, as his twin is his duplicate; *selectivity*, that an exceptional person (he duplicated himself) is involved; *dissociation*, in spite of the delusion the patient has an implicit knowledge of his true identity; *derealization*, as the patient had the impression of living in a dream; and *adaptive aspect*, as the company of a 'twin' is an alternative to loneliness and ongoing isolation due to ageing and growing sensory deprivation (difficulty in hearing).

Furthermore, in the presented cases of the literature, the clear differentiation and the many times common co-existence of several types of DMSs (Capgras syndrome, Frégoli syndrome, intermetamorphosis, delusions of subjective double and inanimate double, autoscopic phenomena and reduplicative paramnesia) were described[2]. In contrast to this approach, recently Margariti and Kontaxakis[15] proposed a potential common pathogenetic factor underlying delusional misidentifications and described these syndromes as disorders of the sense of uniqueness. In the light of this current discourse, our case can be considered interesting, as this is the first case in the literature, in which not the co-existence, but much more the linear evolution and the interpretative aspect of the arising DMSs were predominant.

In the following, we discuss further distinctive characteristics of the presented case from other potential DMSs. There is a clear distinction between the phenomena of *clonal pluralization of the Self* and *subjective doubles* (Capgras type of DMS). In the latter the patient's delusion of experiencing himself refers to a real, existing person, which is a consequence of misidentification[9], so he or she recognizes physically identical doubles of the self in other people. Contrary, in clonal pluralization, as in our presented case, there was no misidentified person, but the delusion on pluralization (reduplication) of the patient himself, where his 'twin' or 'clone' was in all senses, physically and psychologically identical to the patient. Furthermore, *reduplicative paramnesia*, as a possible interpretation should also be discussed. Reduplicative paramnesia is preceded by the disturbance of consciousness and/or delirium, and is often associated with short-term memory deficits, confabulation and disorientation[7]. It has to be highlighted that in our case there were disturbances neither in the above mentioned mental functions, nor in the level of consciousness. Consequently, delirium syndrome and amnestic syndrome with confabulation could also be excluded. We suppose that our patient displayed a secondary, interpretative delusion identical to clonal pluralization of the Self, which he developed after an autoscopic experience caused by dementia, vascular type. We also point out that there was no misidentification of the own mirror image at confrontational testing in our patient, which is common in dementia[16]. Additionally, in order to differentiate reduplicative paramnesia and *autoscopic experience*, we should

bear in mind that in reduplicative paramnesia there is a co-existence of the double; the patient does not see the double, nor experience the double simultaneously in the same space as himself. In autoscopic phenomenon the double is mainly seen or felt, while in RP the double is claimed or assumed[13]. Finally, there is a major difference between clonal pluralization of the Self following a *hallucinatory form* of autoscopic experience (presented in our case) and the *delusional form* of autoscopy. In the former, the patient develops delusions as secondary interpretative thought contents, while in the latter the delusions are primary and do not appear as an interpretation on perceptual phenomena.

Referring to the debates around the classical dichotomy of psychiatric literature dealing with Capgras symptom and DMSs, and the neurological literature dealing mainly with reduplicative paramnesia[17] numerous studies witness growing evidence of organic background in different misidentification syndromes[3,18-20]. Nevertheless, some of them underline that no single brain lesion is specifically associated with reduplications[21]. Feinberg[22] points out the importance of the personality in all the phenomena of alteration of the Self. He claims that brain lesions and neuropsychological impairments are necessary, but the full development of these syndromes depends upon the individual's responses to his or her defects as much as the defects themselves. Questioning the central importance of the sequential stages in different forms of delusional misidentifications described by Ellis and Young[18,23], recently Margariti and Kontaxakis[15] suggested a collective approach, in which they regard DMSs as disorders of the sense of uniqueness, presuming that the co-occurrence of different subtypes implies a common pathogenetic substrate of delusional misidentification syndromes. We suppose that in the future careful phenomenological evaluation of patients with delusional misidentification syndromes is needed for proper classification of the discussed issue.

References

1. De Pauw KW. Delusional Misidentification: A plea for an agreed terminology and classification. Psychopathology 1994; 27: 123-129.

2. Weinstein EA. The classification of delusional misidentification syndromes. Psychopathology 1994; 27: 130-135.

3. Ellis HD, Luauté JP, Rettelstol N. Delusional misidentification syndromes. Psychopathology 1994; 27: 117-120.

4. Murai T, Toichi M, Yamagishi H, Sengok A. What is meant by 'misidentification' in delusional misidentification syndromes. Psychopathology 1998; 31: 313-317.

5. Voros V, Tenyi T, Simon M, Trixler M. 'Clonal pluralization of the self': a new form of delusional misidentification syndrome. Psychopathology 2003; 36(1): 46-48.

6. Ranjan S, Chandra PS, Gupta AK, Prabhu S. Clonal pluralization of self, relatives and others. Psychopathology 2007; 40: 465-467.

7. Weinstein EA, Burnham DL. Reduplication and the syndrome of Capgras. Psychiatry-Interperson Biolog Proc 1991; 54: 78-88.

8. Christodoulou GN. The syndrome of Capgras. Brit J Psychiatry 1977; 130: 556-564.

9. Christodoulou GN. Syndrome of subjective doubles. Am J Psychiatry 1978; 135(,2): 249-251.

10. Pick A. On reduplicative paramnesia. Brain 1903; 26: 242-247.

11. Dening TR, Berrios GE. Autoscopic Phenomena. Brit J Psychiatry 1994; 165: 808-817.

12. Damas Mora JMR, Jenner FA, Eacott SE. On heautoscopy or the phenomenon of the double: Case presentation and review of the literature. Brit J Medical Psychology 1980; 53: 75-83.

13. Brugger P, Regard M, Landis TH. Illusory reduplication of one's own body: phenomenology and classification of autoscopic phenomena. Cognit Neuropsychiatr 1997; 2: 19-38.

14. Alonso-Fernandez F. Fundamentos de la psiquiatria actual. Madrid: Paz Montalvo, 1972.

15. Margariti MM, Kontaxakis VP. Approaching delusional misidentification syndromes as a disorder of the sense of uniqueness. Psychopathology 2006; 39: 261-268.

16. Hemphill RE. Misinterpretation of mirror image of self in presenile cerebral atrophy. J Mental Science 1948; 94: 603-610.

17. Joseph AB. Focal central nervous system abnormalities in patients with misidentification syndromes. Bibl Psychiatr 1986; 164: 68-79.

18. Ellis HD, Young AW. Accounting for delusional misidentifications. Br J Psychiatry 1990; 157: 239-248

19. Ellis HD. The role of the right hemisphere in the Capgras delusion. Psychopathology 1994; 27: 177-185.

20. Signer SF. Localisation and lateralization in the delusion of substitution. Psychopathology 1994; 27: 168-176.

21. Bouvier-Peyrou M, Landis TH, Annoni JM. Self-duplication shifted in time: A particular form of delusional misidentification syndrome. Neurocase 2000; 6: 57-63.

22. Feinberg TE. Some interesting perturbations of the self in neurology. Semin Neurol 1997; 17: 129-135.

23. Tenyi T, Abraham I, Lenard K, Trixler M. Frégoli delusion rooted in sexual behavior. Psychiatr Danub 1999; 11: 61-63.

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