 DOI: 10.18231/2455-8559.2017.0027

Delusional Misidentification Syndromes in Patients of Paranoid Schizophrenia: Case Series and Review

Prashant C Jariwala[1,*], Nilima D Shah[2], Kamlesh R Dave[3], Ritambhara Y Mehta[4]

[1]Psychiatrist Class1, [2,3]Assocate Professor, [4]Professor & HOD, 1Dept. of Gernal Hospital, Rajpipla, Dist-Narmada, Gujarat, [2]Dept. of Psychiatry, Smt. NHL Municipal Medical College, Ahmedabad, Gujarat, [3,4]Dept. of Psychiatry, Govt. Medical College & Civil Hospital, Surat, Gujarat

***Corresponding Author:**
Email: dr.prashant.jariwala@gmail.com

Abstract

Delusional Misidentification is a vast term for a group of Delusional Disorders involving a belief that the identity of a person, object or a place has somehow changed or has been altered. The term 'Delusional Misidentification Syndrome' (DMS) was first used by Christodoulou. It can occur in various conditions**.** Schizophrenia, mood disorders, drug intoxication, infections, endocrinal disorders, epilepsy, dementia, delirium and head injury. It is usually associated with impairment in facial recognition and marked impairment in working memory.

Here we report five cases of DMS in the setting of paranoid schizophrenia, either as a single DMS or combination of various DMS, like Fregoli, Capgras, and Clonal pluralization.

We also reviewed and discussed other cases of DMS reported in literature including the demographics, psychiatric disorders in which they occurred, underlying neurological abnormalities and their response to treatment.

Keywords: Delusional Misidentification, Paranoid Schizophrenia, Facial Recognition, Fregoli, Capgras, Clonal Pluralization.

Introduction

Delusional Misidentification syndrome is a vast term, first coined by Christodoulou[(1)] for a group of delusional disorders that occur in the context of mental or neurological illness. They all involve a belief that the identity of a person, object or place has somehow changed or has been altered.

This syndrome is usually considered to include four main variants:[(2)]

The Capgras delusion: Capgras syndrome is the delusion that an impostor has replaced a close friend or relative. It is named after Joseph Capgras, a French psychiatrist who first described the disorder in a paper he co-authored with Reboul-Lachaux in 1923. They used the term l'illusion des sosies (the illusion of doubles) to describe the case of a woman who complained that various "doubles" had taken the place of people she knew.

The Fregoli delusion: Fregoli syndrome is a disorder in which a person holds a delusional belief that different people are in fact a single person who changes his or her appearance or is in disguise. The condition is named after the Italian actor Leopoldo Fregoli, who was renowned for his ability to make quick changes in his appearance during his stage acts.

Intermetamorphosis: Intermetamorphosis is the belief that people in the environment swap identities with each other whilst maintaining the same appearance.

Subjective doubles: Subjective doubles, described by Christodoulou in 1978, is the belief that there is a doppelgänger or double of him or herself carrying out independent actions.[(3,4)] However, similar delusional beliefs, often singularly or more rarely reported, are sometimes also considered to be part of the Delusional Misidentification Syndrome like the Mirrored-self misidentification which is a belief that one's reflection in a mirror is some other person, reduplicative where there is a belief that a familiar person, place, object or body part has been duplicated,[(5)] The Cotard delusion is a rare disorder in which people hold a delusional belief that they are dead (either figuratively or literally), do not exist, are putrefying, or have lost their blood or internal organs. In rare instances, it can include delusions of immortality.[(6)] Syndrome of delusional companions is the belief that objects (such as soft toys) are sentient beings.[(7)] Clonal pluralization of the self where a person believes there are multiple copies of him or herself, identical both physically and psychologically but physically separate and distinct.[(8)]

Delusional Misidentification Syndromes seldom appear independent of co morbid pathology. They have been reported in association with other psychiatric disorders in 60% to 75% of cases and in organic illnesses in 25% to 40% of cases. The most common psychiatric diagnoses have been paranoid schizophrenia, schizoaffective disorder and bipolar disorder. In the last 20 years, reports have increasingly stressed the etiologic importance of a variety of conditions that have been found in the patients with misidentification syndromes, including cerebrovascular disease, post-traumatic encephalopathy, temporal lobe epilepsy, post-encephalitic Parkinsonism, viral encephalitis, migraine, vitamin B12 deficiency, hepatic encephalopathy, hypothyroidism, pseudoparathyroidism, and dementia.[(9,10)]

Misidentification syndromes are more frequent in females (75%). Age of onset varies from 12 to 78, with an average in the early 40's.[11] In majority of patients, the onset is after the age of 30.[12] Family history of psychosis is reportedly present in 50% of patients,[13] which calls into question the emphasis upon acquired organic origins of these syndromes[14] although genetic vulnerability for organically induced misidentification psychosis might be an important etiologic factor.

Case Report

Case 1

50 years male Mr JP, presented with a 4 year duration illness. He had initially presented with complaints of was brought by his relatives, with complains of behavioural disturbance; talking to self; doing meditation at midnight, sleep disturbances and increased religious activity. He also reported hearing of voices, of 2 to 3 people, conversing with each other, wanting to know something about him. A diagnosis of schizophrenia-paranoid type was made and treated for the same where he showed good improvement. However he discontinued medication and replased. This time he became suspicious about his maternal aunt & uncle and his son-in-law that they were following him everywhere. In his verbatim: "I'm sure my maternal aunt and uncle & my son-in-low are always following me, wherever I go they meet me. I see them in disguise as five different people. Sometimes disguised as a vegetables vendor, sometimes as a milk maid, sometimes on bicycle as a labourer. They are following me but at the same time are ignoring me also…"

On one occasion, patient became aggressive and attacked a stranger believing that he was his maternal uncle, disguised as a newspaper distributor, following him, and trying to know his secrets.

The patient responded well to treatment with oral Risperidone 4 mg and Benzhexol 2 mg. There was a substantial symptomatic improvement and the patient is functioning well socio-occupationally.

Case 2

Mr R, 55 year male, brought by his relatives, tied with ropes, with complaints of abusive, occasional violent outbursts, sleep disturbance in the form of decreased sleep at night, erratic food intake, talking irrelevantly, suspicious on others and on family members, sometimes muttering to self and not working for the last 10 years.

This was the second time he was being hospitalised with the first time being 8 years back, but discontinued medication soon after discharge.

During the recent hospital admission, patient was diagnosed as schizophrenia-Paranoid type. Patient was suspicious towards his son and his sister and had become aggressive towards them.

When the patient was interviewed along with his son in the psychiatry ward, patient revealed that it was not his real son but one of the three girls who died in his village. Those girls had come as imposters and were trying to kill him by mixing poison in his food. Those three girls sometimes disguised themselves as other people (patient gave details of nine such people) who followed him and tried to harass him.

Patient also had a history of beating other people like the tea vendor in his neighbourhood and sometimes strangers at market places believing that these were the three girls following and harassing him. He responded well to a course of seven ECTs. He was on discharged on Tab Risperidone 8 mg, Trifluoperazine 10mg, Benzhexole 6 mg and Clonazepam 1.5mg, with significant improvement in symptoms.

Case 3

A 40 years female, presented with a 6 year old illness, characterised by aggression, poor self-care, wandering, suspicion on neighbours and husband diagnosed as a case of Schizophrenia- paranoid type. She revealed that her husband was not her husband; instead he was someone else, a double, 'wearing his make-up'. She believed that he had been replaced. Moreover she added that her guru could produce multiple copies of any one. And there existed multiple copies of her husband and herself . .She was diagnosed to be having Capgras delusions and Clonal pluralization. She responded well to a course of Tab Risperidone 8 mg, Trifluoperazine 20 mg and Clozapine 200 mg and to Electroconvulsive therapy.

Case 4

A 45 years old female presented with a one and half duration illness characterised by running away from home, muttering to self, hearing voices of neighbours discussing her while alone and disturbed sleep**.** She believed that her foot wear, clothes, utensils etc were replaced by exactly similar copies by neighbours. She was diagnosed as schizophrenia paranoid type and the symptoms were diagnosed as Capgras delusions of objects being replaced. She was treated with Tab Haloperidol 20mg, Benzhexol 6 mg, Olanzapine 20 mg and a course of 6 ECTs. She responded well to the treatment and there was a significant reduction in symptoms during discharge.

Case 5

A 30 years old female presented with Suspiciousness over husband and parents that they had done black magic over her, hearing of voices when alone, not sleeping at night, talking to self, making gestures. According to her, her son was not her own, but replaced by someone identical. She was diagnosed as a case of Schizophrenia-paranoid type having Capgras delusions. She responded well to Tab Olanzapine 20 mg.

Discussion

Here we reported five patients of schizophrenia paranoid type. The first had Fregoli's delusion, the second had a combination of Fregoli's and Capgras delusion, third had a combination of Capgras and Clonal Pluralization, fourth had Capgras delusion for objects

and fifth had Capgras delusion. Our cases have DMS in association with paranoid schizophrenia. Various other cases of DMS have been reported in the literature, associated with psychiatric as well as neurological conditions, like affective disorders, seizure Disorders, interictal psychosis etc. (Table 1)

Table 1: Reported Cases of DMS and Associated Conditions

Sr. No.	Author/s	Appx. Numbers	Associated condition/s
1.	Mojtabai R.[15]	34	Schizophrenia, paranoid
2.	Joseph AB, O'Lear DH[16,17]	10	Anterior cortical atrophy
3.	Oyebode F, Sargeant R[18]	23	Schiozophrenia and Schizo-affective disorder
4.	Forstl H, Almeida OP, Owen AM, Burns A, Howard R[19]	260	Schizophrenia followed by affective disorder followed by organic disorder
5.	Signer SI[20]	315	46% affective disorder
6.	Harpreet S Duggal[21]	1	Interictal psychosis with Fregoli
7.	Christodoulou[22]	2	Seizure
8.	Chawla and Virmani[23]	1	Seizure
9.	Lim and Chee[24]	1	Seizure
10.	Silva et al[25]	6	Schizophrenia, paranoid
11.	A. Ghaffari-Nejad, K. Toofani[26]	1	Grandmal epilepsy
12.	Yasushi Moriyama et al[27]	1	Schizophrenia, paranoid
13.	David M. Roane et al[28]	3	Parkinson's disease
14.	Annelie K. Hintzen et al[29]	1	Schizophrenia
15.	R. Ramesh et al[30]	1	Schizophrenia, paranoid
16.	Ajit V Bhide[31]	2	Schizophrenia, paranoid
17.	Berson[32]	133	63% of subjects were affected by schizophrenia, 13% had a maniac-depressive illness and 24% had a mental disorder due to a general medical condition
18.	Salviati et al[33]	1	Infection related-delirium

It is important to identify these syndromes in patients as these may be the underlying cause of aggression and violence. In our case reports all patients had shown aggression secondary to facial misrecognition. In a study of 82 subjects with DMS defined violence as verbal threats or physical violence were directly associated with a misidentification delusion. 50 of the 82 patients had attacked someone else; the most common victims being parents.[34] In another study by Silva et al, of 29 patients with DMS, 16 had threatened others without acting on the threats, whereas 13 became physically assaultive in connection with their misidentification syndromes.[35,36]

Many organic conditions have been implicated in DMS like seizure disorders, interictal psychosis, and non-dominant right hemisphere dysfunction. (Table 2) Signer reviewed 252 cases with Delusional Misidentification Syndromes, out of whom 200 cases had an organic contributor.[20]

Table 2: Reported cases Of DMS Associated with Organic Etiology

Sr. no.	Authors	Organic Etiology
1.	Feinberg et al[37,38]	Right cerebral hemisphere involvement
2.	Malloy et al[39]	Right cerebral hemisphere dysfunction
3.	Fleminger, Burns[40]	Right cerebral hemisphere dysfunction
5.	De Pauw et al[41,42]	Right cerebral hemisphere dysfunction
6.	Joseph, O'Leary[17]	Bilateral involvement
7.	Cummings[43]	Bilateral involvement
8.	Christodoulou[22]	Non-dominant occipito temporal areas
10.	Hudson et al[44]	Lesion in anterior fusiform gyrus and right temporal lobe

There is no particular antipsychotic proven to be more efficacious than others in DMS. Among all these five patients, first and fifth patients improved with single anti-psychotic (AP), second, third and forth patients improved with a combination of first and second generation APs along with ECT. Based on the good response to ECT seen in our patients, we suggest that it may be tried in patients not responding to AP medications alone. For treatment of various DMS, various treatments have been tried, like antipsychotics, antidepressants, mood stabilizers. (Table 3)

Table 3: Treatment of DMS: Reported Cases

Author/s	Treatment
Christodoulou GN[45]	Respond to various biological treatment methods. tricyclic antidepressants, neuroleptics, combination of antipsychotic treatment with treatment of co-existing organic dysfunction.
De Leon[46]	Combination Of Antipsychotics + Carbamazepine+ Benzodiazepines
Silva et al[47]	Antipsychotics+ Mood Stabilizers+ Anti-depressants
Tueth MJ, Cheong JA[48]	Pimozide
Aziz et al[49]	Combination Of Antipsychotics + Carbamazepine+ Benzodiazepines
Lucia Gallego et al[50]	Risperidone depot formulation

Conclusion

As the numbers of Delusional Misidentification Syndromes are being increasingly reported, a more in-depth evaluation is needed in order to clarify the relationship between psychiatric/organic disorders and Delusional Misidentification Syndromes. Early identification & treatment can prevent violent behaviour & alleviate the distress of the patient and care-givers.

Acknowledgements – Nil
Conflict of Interest – Nil
Source of Funding – Nil

References

1. Christodoulou GN (ed): The Delusional Misidentification Syndromes. Key Issues Ment Health. Basel, Karger, 1986, vol 164, pp I-IX (DOI:10.1159/000412313).
2. Ellis HD, Luauté JP, Retterstol N "Delusional Misidentification Syndromes".Psychopathology 1994;27(3-5):117–20.
3. Christodoulou G.N. The Syndrome of Capgras, Brit. J. Psychiat 1977;130:556-64.
4. Christodoulou G.N. Syndrome of Subjective Doubles, Am. J. Psychiat 1978;135(2):249-51.
5. Benson DF, Gardner H, Meadows JC "Reduplicative paramnesia". Neurology 1976;26(2):147-51.
6. Berrios G.E., Luque R. "Cotard Syndrome: clinical analysis of 100 cases".Acta Psychiatrica Scandinavica 1995;91:185-188.
7. Shanks MF, Venneri A "The emergence of delusional companions in Alzheimer's disease: an unusual misidentification syndrome". Cogn Neuropsychiatry 2002; 7 (4):317–28.
8. Vörös V, Tényi T, Simon M, Trixler M "Clonal pluralization of the self': a new form of Delusional Misidentification Syndrome". Psychopathology 2003;36(1): 6-8.
9. Cummings, J L: Clinical Neuropsychiatry; Grune and Stratton, Inc., 1985.
10. Dohn, HH, and Crews, EL: Capgras syndrome: A literature review and cases series, Hillside J Clin Psychiatry 1986;8:56-74.
11. Berson, RJ: Capgras' syndrome, Am J Psychiatry 1983;140: 969- 978.
12. Enoch, MD: Whose Double?, in The Delusional Misidentification Syndromes, by G.N . Christodoulou (editor), Biblioteca Psychiatrica; Karger, 1986;164:22-29.
13. Kimura, S: Review of 106 cases with the syndrome of Capgras, in The Delusional Misidentification Syndromes, by GN Christodoulou (editor), Biblioteca Psychiatrica ; Karger, 1986;164:121-130.
14. Hirstein, W; Ramachandran, VS: "Capgras syndrome: a novel probe for understanding the neural representation of the identity and familiarity of persons". Proceedings of the Royal Society B 1997;264(1380):437-444.
15. Mojtabai R: Fregoli syndrome. Aust NZ J Psychiatry 1994;28:458-462.
16. Joseph AB, and O'Leary, DH: Anterior cortical atrophy in Fregoli syndrome. J Clin Psychiatry 1 987;48:409-411.
17. Joseph, AB, O'Leary, DH, and Wheeler, HG : Bilateral a trophy of the frontal and temporal lobes in schizophrenic patients with Capgras syndrome: A Case-Control study using CT.J Clin Psychiatry 1990;51:322-325.
18. Oyebode F, Sargeant R. Delusional Misidentification Syndromes: a descriptive study. Psychopathology 1996;29:209–14.
19. Forstl H, Almeida OP, Owen AM, Burns A, Howard R. Psychiatric, neurological and medical aspects of misidentification syndromes: a review of 260 cases. Psychol Med 1991;21:905-10.
20. Signer SF. Localization and lateralization in the delusion of substitution. Capgras syndrome and its variants. Psychopathology. 1994;27:168-176.
21. Harpreet S. Duggal. Interictal Psychosis Presenting With Fregoli Syndrome. The Journal of Neuropsychiatry and Clinical Neurosciences 2004;16(4):543-544.
22. Christodoulou GN: The Delusional Misidentification Syndromes. Br J Psychiatry 1991;159(suppl 14):65-69.
23. Chawla HM, Virmani V. Capgras syndrome in a case of temporal lobe epilepsy. Folia Psychiatri Neurol Japonica 1977;31:615-617.

24. Lim SH, Chee KT. Schizophrenia-like psychosis with right lobe epilepsy: a case report. Singapore Med J. 1985;26:490 -493.
25. Silva JA, Leong GB, Weinstock R, Klein RL. Psychiatric factors associated with dangerous misidentification delusions. Bull Am Acad Psychiatry Law. 1995;23:53-61.
26. Alireza Ghaffari-Nejad, Khatereh Toofani. A report of capgras syndrome with belief in replacement of inanimate objects in a patient who suffered from grandmal epilepsy. Arch Iranian Med 2005;8(2):41-143.
27. Yasushi Moriyama, Taro Muramatsu, Motoichiro Kato, Masaru Mimura, Tomoko Akiyama, Haruo Kashima. Frégoli Syndrome Accompanied with Prosopagnosia in a Woman with a 40-year History of Schizophrenia. Keio J Med 2007;56 (4):130-134.
28. David M. Roane, John D. Rogers, Jessica H. Robinson, Todd E. Feinberg. Delusional Misidentification in Association with Parkinsonism. The Journal of Neuropsychiatry and Clinical Neurosciences 1998;10:194-198.
29. Annelie K. Hintzen, Claudia Wilhelm-Gößling, Petra Garlipp. Combined Delusional Syndromes in a Patient with Schizophrenia: Erotomania, Delusional Misidentification Syndrome, Folie à Deux and Nihilistic Delusion. German J Psychiatry 2010;13(2):96-99.
30. R. Ramesh, Arunava Das & P. John Alexander. A case of Delusional Misidentification Syndrome with Maccallum and De Clerambault variants. Indian J. Psychiat, 1997;39 (3):256-258.
31. Ajit V Bhide. A capgras like state for inanimate objects: two case reports. Indian J Psychiat. 1994;36(4):197-198.
32. Berson RJ. Capgras' syndrome. Am J Psychiatry 1983;140:969-78.
33. M. Salviati, C. Carlone, A. Provenzano, et al. Fregoli syndrome in course of infection-related delirium. A case report. Journal of Psychopathology 2014;20:180-185.
34. Lykouras L, Typaldou M, Mourtzouchou P. Neuropsychological relationships in paranoid schizophrenia with and without Delusional Misidentification Syndromes: a comparative study. Prog Neuropsychopharmacol Biol Psychiatry 2008;32:1445-8.
35. Silva JA, Gregory B, Leong MD. The dangerousness of persons with misidentification syndromes. Bull Am Acad Psychiatry Law 1992;20:77-86.
36. Silva JA, Leong GB, Weinstock R. Psychiatric factors associated with dangerous misidentification delusions. Bull Am Acad Psychiatry Law 1995;23(1):53-61.
37. Feinberg TE, Eaton LA, Roane DM, Giacino JT. Multiple Fregoli delusions after traumatic brain injury. Cortex. 1999;35(3):373-87.
38. Feinberg TE, Shapiro RM: Misidentification-reduplication and the right hemisphere. Neuropsychiatry, Neuropsychology, and Behavioral Neurology 1989;2:39-48.
39. Malloy P, Cimino C, Westlake R. Differential diagnosis of primary and secondary Capgras delusions. Neuropsych Neuro-psychol Behav Neurol 1992;5:83-96.
40. Fleminger S, Burns A. The Delusional Misidentification Syndromes in patients with and without evidence of organic cerebral disorder: a structured review of case reports. Biol Psychiatry. 1993;33(1):22-32.
41. De Pauw KW, T K Szulecka. Dangerous delusions. Violence and the misidentification syndromes. The British Journal of Psychiatry 1988;152:91-6.
42. De Pauw KW, Szulecka TK, Potlock T. Frégoli syndrome after cerebral infarction. J Nerv Ment Dis 1987;175:433-8.
43. Cummings JL. Behavioral complications of drug treatment of Parkinson's disease. J Am Geriatr Soc 1991;39:708-716.
44. Hudson AJ, Grace GM. Misidentification syndromes related to face specific area in the fusiform gyrus. J Neurol Neurosurg Psychiatry 2000;69(5):645–8.
45. Christodoulou GN, Treatment of the "syndrome of doubles". Acta Psychiatr Belg. 1977;77(2):254-9.
46. De León OA. The intermetamorphosis syndrome. J Clin Psychiatry 1992;53(1):29-30.
47. Silva JA, Leong GB, O'Reilly T. An unusual case of Capgras syndrome: the psychiatric ward as stage. Psychiatr J Univ Ott. 1990;15(1):44-46.
48. Tueth MJ, Cheong JA, Successful treatment with pimozide of capgras syndrome in an elderly male. J geriatr psychiatry neurol. 1992;5(4):217-9.
49. Aziz MA, Razik GN, Donn JE. Dangerousness and management of Delusional Misidentification Syndrome. Psychopathology 2005;38(2):97-102.
50. Lucía Gallego, Susana Vázquez, José C. Peláez, Juan J, López-Ibor. Neuropsychological, clinical and social issues in two patients with capgras syndrome. Actas Esp Psiquiatr 2011;39(6):408-14.