

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

Prashant C Jariwala<sup>1,\*</sup>, Nilima D Shah<sup>2</sup>, Kamlesh R Dave<sup>3</sup>, Ritambhara Y Mehta<sup>4</sup>

<sup>1</sup>Psychiatrist Class1, <sup>2,3</sup>Associate Professor, <sup>4</sup>Professor & HOD, <sup>1</sup>Dept. of Gernal Hospital, Rajpipla, Dist-Narmada, Gujarat, <sup>2</sup>Dept. of Psychiatry, Smt. NHL Municipal Medical College, Ahmedabad, Gujarat, <sup>3,4</sup>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<sup>(1)</sup> 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:**<sup>(2)</sup>

**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.<sup>(3,4)</sup> 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,<sup>(5)</sup> 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.<sup>(6)</sup> Syndrome of delusional companions is the belief that objects (such as soft toys) are sentient beings.<sup>(7)</sup> 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.<sup>(8)</sup>

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.<sup>(9,10)</sup>

Misidentification syndromes are more frequent in females (75%). Age of onset varies from 12 to 78, with an average in the early 40's.<sup>(11)</sup> In majority of patients, the onset is after the age of 30.<sup>(12)</sup> Family history of psychosis is reportedly present in 50% of patients,<sup>(13)</sup> which calls into question the emphasis upon acquired organic origins of these syndromes<sup>(14)</sup> 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 relapsed. 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-law 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. <sup>(15)</sup>	34	Schizophrenia, paranoid
2.	Joseph AB, O'Lear DH <sup>(16,17)</sup>	10	Anterior cortical atrophy
3.	Oyebode F, Sargeant R <sup>(18)</sup>	23	Schizophrenia and Schizo-affective disorder
4.	Forstl H, Almeida OP, Owen AM, Burns A, Howard R <sup>(19)</sup>	260	Schizophrenia followed by affective disorder followed by organic disorder
5.	Signer SI <sup>(20)</sup>	315	46% affective disorder
6.	Harpreet S Duggal <sup>(21)</sup>	1	Interictal psychosis with Fregoli
7.	Christodoulou <sup>(22)</sup>	2	Seizure
8.	Chawla and Virmani <sup>(23)</sup>	1	Seizure
9.	Lim and Chee <sup>(24)</sup>	1	Seizure
10.	Silva et al <sup>(25)</sup>	6	Schizophrenia, paranoid
11.	A. Ghaffari-Nejad, K. Toofani <sup>(26)</sup>	1	Grandmal epilepsy
12.	Yasushi Moriyama et al <sup>(27)</sup>	1	Schizophrenia, paranoid
13.	David M. Roane et al <sup>(28)</sup>	3	Parkinson's disease
14.	Annelie K. Hintzen et al <sup>(29)</sup>	1	Schizophrenia
15.	R. Ramesh et al <sup>(30)</sup>	1	Schizophrenia, paranoid
16.	Ajit V Bhide <sup>(31)</sup>	2	Schizophrenia, paranoid
17.	Berson <sup>(32)</sup>	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 <sup>(33)</sup>	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.<sup>(34)</sup> 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.<sup>(35,36)</sup>

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.<sup>(20)</sup>

**Table 2: Reported cases Of DMS Associated with Organic Etiology**

Sr. no.	Authors	Organic Etiology
1.	Feinberg et al <sup>(37,38)</sup>	Right cerebral hemisphere involvement
2.	Malloy et al <sup>(39)</sup>	Right cerebral hemisphere dysfunction
3.	Fleminger, Burns <sup>(40)</sup>	Right cerebral hemisphere dysfunction
5.	De Pauw et al <sup>(41,42)</sup>	Right cerebral hemisphere dysfunction
6.	Joseph, O'Leary <sup>(17)</sup>	Bilateral involvement
7.	Cummings <sup>(43)</sup>	Bilateral involvement
8.	Christodoulou <sup>(22)</sup>	Non-dominant occipito temporal areas
10.	Hudson et al <sup>(44)</sup>	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 fourth 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 <sup>(45)</sup>	Respond to various biological treatment methods. tricyclic antidepressants, neuroleptics, combination of antipsychotic treatment with treatment of co-existing organic dysfunction.
De Leon <sup>(46)</sup>	Combination Of Antipsychotics + Carbamazepine+ Benzodiazepines
Silva et al <sup>(47)</sup>	Antipsychotics+ Mood Stabilizers+ Anti-depressants
Tueth MJ, Cheong JA <sup>(48)</sup>	Pimozide
Aziz et al <sup>(49)</sup>	Combination Of Antipsychotics + Carbamazepine+ Benzodiazepines
Lucia Gallego et al <sup>(50)</sup>	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.

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