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PHENOMENOLOGY OF SOMATIC DELUSION AND ITS THERAPEUTIC OPTIONS

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INTRODUCTION

A delusion concerning a somatic theme is entertained when a sufferer holds a fixed, firm and unshakable belief that she/he has an illness related to body structure or function. Somatic delusions of various themes are: preoccupation that individual emits a foul odour (bromosis), belief that there is infestation of insects on or in the skin (delusional parasitosis), belief that certain parts of body are deformed or ugly (dysmorphic delusion), preoccupation with having serious illness (hypochondriacal delusion). Often such a delusion (somatic/ hypochondriacal) becomes resistant to usual psychiatric treatment and it lingers for years causing significant psychosocial dysfunction (Skelton et al. 2015). There is still ambiguity in clear edge of one medication over others, in treatment of somatic delusions. Commonly, patients with delusional disorder receive a combination of antipsychotic and antidepressant medication, as well as other interventions such as cognitive behavioural therapy or mECT (Skelton et al. 2015). However, response rate is variable and most of cases do not respond to initial medications and ultimately different agents need to be tried with variable success. We report a case series with different symptom presentation of somatic delusion and subsequently highlighted individual treatment approaches in such cases.

CASE SERIES

Index case 1: A young male in early 20's presented with an insidious onset and a continuous deteriorating course of 2 years duration of complains of asymmetry of his face in the form of lower half of his face turned to right side leading to difficulty in chewing the food and difficulty in speaking along-with perceived deformity of his knee joints and elbow joints in the form of both the joints turning opposite. Despite multiple consultation, multiple normal investigations and repeated assurances by family and friends, he continued to hold his belief with firm conviction about his deformity. As presenting symptoms were mostly related to mandibular area of face, therefore X-ray, detailed clinical E.N.T. evaluation, detailed clinical dental evaluation done which did not revealed any abnormality. He was diagnosed with Body dysmorphic disorder with absent insight/ delusional belief according to DSM-5.The patient was started on oral Olanzapine 10 mg and Fluoxetine up to 40 mg to address preoccupation and resulting mood disturbances but the patient had to be discharged within a week due to frequent requests by family members despite of persistent psychopathology with minimal response when it came to preoccupation. Patient did not follow up subsequently after 2 weeks. Ony 1 supportive session of non-pharmacological intervention could be done prior to discharge. BABS Score at the time of admission was 20 which decreased to 18 during discharge.

Index Case 2: A young male in mid-30's presented to us with complaints of 4 years duration of multiple somatization complaints in the form of stomach-ache, gastric reflux and lower abdominal discomfort for the initial 3 years followed by multiple consultations to various doctors, multiple investigations and frequent changing of doctors with no evidence of any abnormality reported in any of the documents or prescriptions, followed by 3-4 months history of persistent pre-occupation with symptoms characterized by a belief of food, stool and water moving down his abdomen towards the inner aspect of his thigh causing a swelling and blockage of gas outflow and constipation despite contrary evidence. Consequently, he held belief of developing a hernia since the past 3 months to the level of significant socio- occupational decline along with frequent visits to surgery department and requesting for surgery for hernia despite no evidence of hernia. Diagnosis of Delusional disorder somatic type was made according to DSM5. After admission, patient underwent ultrasonography of abdomen and thigh, barium swallow study, upper and lower gastrointestinal endoscopy which were within normal limit. The patient showed partial improvement in somatic symptoms on olanzapine 10 mg /day for delusions during admission in

which he was kept for 4 weeks. CBT was planned for the patient however due to preoccupation with symptoms as well as lack of psychological sophistication it could not be implemented. However, patient had to be discharged because of familial reason and in further follow ups in the following months, he showed further reduction in somatic symptoms. However, conviction regarding hernia persisted, but there was fluctuation in preoccupation during follow up. BABS Score at the time of admission was 24 which decreased to 8 on follow up. The patient is in regular follow up since last one and half year with incomplete remission.

Index Case 3: A middle aged female in mid-50's presented with 3 years duration of complaints of multiple somatic symptoms involving her throat, tooth and facial region. She stopped doing her household chores and used to remain preoccupied with her complaints. Before the current presentation, she visited many physicians and underwent multiple investigations but no proper explanation of her symptoms could be found. She would tell that if taken, the food will not reach her stomach. She refused to take any food citing same reason. She held this thought with conviction despite contrary evidence. She has been admitted thrice in last 3 years, each time with similar presentation due to noncompliance of medications with resolution of symptom at the time of discharge. Diagnosis of Delusional disorder somatic type was made according to DSM-5. She was managed with adequate trials of Risperidone (up to 8 mg/day) for 4 week with no significant response. Patient was cross tapered with Olanzapine (up to 15 mg/day) along with modified bi-temporal ECT (8 modified ECTs session) which was planned as patient's refusal to eat due to her active psychopathology which warranted prompt interventions. Further continuation of treatment was the rationale for add on treatment of olanzapine along with ECT. She responded significantly with substantial reduction of the conviction of her belief. Patient was started on 2-3 sessions of supportive psychotherapy, however, due to lack of patient understanding and perceived benefit of psychotherapy it could not be done systematically. The family members were provided psychoeducation about the need for compliance and periodic follow-ups and patient was in regular follow up every couple of weeks since then. BABS Score decreased from 16 to 6.

Index Case 4: A middle aged female in early-50's with past history of obsessional compulsive symptoms (dirt and contamination) for past 15 years and medical history of Hypertension , Bronchial Asthma, Systemic Sclerosis on treatment for the same, well controlled, presented to us with the complaints of duration of 5 months characterized by a persistent belief of her skin getting detached from her body, half of her body being lifeless and dead, loosening of her teeth and secondary affective symptoms in the form of persistent and pervasive low mood, weeping spells, decreased energy, sleep disturbances with active suicidal ideation. Her belief persisted despite no evidence of the same. she believed that her half body was dead due to inadequate supply of blood and that is why skin was detaching from the bone. Patient was having no clinical abnormality on local examination of skin or any abnormal findings in dental examination. She underwent upper gastrointestinal endoscopy as well, which also came out to be normal. Diagnosis of Delusional disorder somatic type along with co-morbid Major depressive disorder was made according to DSM-5. Patient was treated with combination of aripiprazole (up to 15 mg/day) for delusional component along with sertraline 150mg/day for mood symptoms with 6 effective sessions of mECT for the next 2 weeks, to which she responded and was subsequently discharged. There was a marked decrease in low mood, lack of motivation and preoccupation with her skin. She was also provided multiple sessions of CBT addressing depressive cognitions as well as addressing insight oriented psychotherapy for delusional beliefs. After being discharged, patient followed up for medication to other psychiatric hospital near to her home. BABS score at the time of admission was 22 which came down to 10.

Index Case 5: A young male in late 30's presented with 3 years duration of symptoms of gastric disturbances. He would also say that the worms are in his brain and whenever they move, it causes him severe headache. He would try to get rid of these worms by rubbing over that area but as per the patient they would frequently change their position. He would remain preoccupied with these beliefs despite several assurances from doctors, family members as well as no investigation supporting his belief. Gradually his pre-occupation and conviction increased to the extent that he avoided taking food all together as he started to believe that the worms would not move if he would avoid food as after eating food, the worms which are primarily residing in the brain would move to his stomach to take the food and this movement will cause him severe headache and gastric discomfort. MRI brain as well as upper and lower gastrointestinal endoscopy had normal findings. Diagnosis of Delusional disorder somatic type (delusional parasitosis) was made according to DSM-5. Patient was started on Paroxetine 12.5 mg/day as it showed evidence in delusional parasitosis along with aripiprazole 5mg/day for delusions for 5 weeks to

which patient had shown significant improvement in conviction and preoccupation and he has been regularly following up with us in last two years. BABS Score came down from 22 to 6. Patient was initially not willing to take part in psychotherapy sessions, however, after 3 weeks as he improved, he took 2-3 sessions of insight oriented psychotherapy.

DISCUSSION

Treatment of delusional disorder (especially somatic type), is still not extensively studied because very little is understood clearly in respect to neurobiological underpinnings of somatic delusions (Huber et al. 2018). Evidence based guidelines on treatment still in nascent stage and much variability exists in approach, as well as response to treatment. A systematic review of case reports by Skelton et al in 2015 showed that commonly, patients with delusional disorder receive a combination of antipsychotic and antidepressant medication, as well as other interventions such as cognitive behavioural therapy. There is still ambiguity in clear edge of one medication over others, in treatment of somatic delusions, as study findings mostly in the form of case reports.

In this case series, we have tried to understand the somatic delusion from phenomenological perspectives and its response to treatment (**Table 1**). At the onset, when

Table 1: Phenomenology of somatic delusion and its treatment and outcome

PHENOMENOLOGY	INTERVENTIONS	OUTCOME	
		BABS score at the time of admission	BABS score in follow ups/ discharge
Asymmetry of lower half of face, turning to right side, difficulty in chewing the food, speaking, deformity of his knee joints and elbow joints in the form of both the joints turning opposite.	Olanzapine 10 mg, Fluoxetine up to 40 mg	20	18
Gastric reflux and lower abdominal discomfort followed by 3-4 months history of persistent pre-occupation with symptoms characterized by a belief of food, stool and water moving down his abdomen towards the inner aspect of his thigh causing a swelling and blockage of gas outflow and constipation developing a hernia despite no evidence.	Tab. olanzapine 10 mg /day	24	8
Multiple somatic symptoms involving her throat, tooth and facial region leading to refusal to eat as food would not reach the stomach.	Risperidone (up to 8 mg/day) and Olanzapine (up to 15 mg/ day) along with modified bi-temporal ECT (8 modified ECTs session)	16	6
Persistent belief of her skin getting detached from her body, half of her body being lifeless and dead due to inadequete supply of blood, loosening of her teeth and secondary affective symptoms in the form of persistent and pervasive low mood, weeping spells, decreased energy, sleep disturbances with intermittent death wishes.	aripiprazole (up to 15 mg/day) along with sertraline 150mg/ day with 6 effective sessions of mECT,	22	10
Gastric disturbances and that there are worms in his brain and whenever they move, it causes him severe headache, also move whenever he ate, going to the stomach due to which he stopped eating.	Paroxetine 12.5 mg/ day along with aripiprazole 5mg/day	22	8

a patient comes in contact with a doctor, the complaints sound like the patient having body dysmorphia. They also appear quite plausible at times as a patient of systemic sclerosis (which is known to have dermatological manifestations) complaining about her skin falling out. Yet further investigations reveal that such complaints are out of proportion to the physical symptoms. We have also highlighted how somatic delusions can be life threatening as in at least two cases, we saw a firm refusal to eat- either due to the active psychopathology itself or due to secondary depressive symptoms. A common theme that comes out of our experiences with these 5 index cases is that they scored high on conviction in BABS score during follow ups making them vulnerable to relapses and return of the original psychopathology. We found it difficult to distinguish if they were having abnormal perceptions which had fixed their beliefs yet it was mostly seen that even if they acknowledged normal perceptions, they continued with their beliefs in spite of evidence to the contrary. This showed that such somatic delusions are defects of their thought rather than perception.

In such cases where patients present with single theme fixed delusional belief, antipsychotics remain preferred mode of treatment. Pimozide is often reported as a first-choice drug, but it has serious cardiovascular side effects like QTc prolongation (Munoz-Negro et al. 2020). In a systematic review of case reports identified 21 single cases of delusional disorders, mostly somatic type, treated with aripiprazole (Miola et al. 2020). All studied patient reported clinical improvements after the treatment with aripiprazole. In delusional parasitosis cases, a narrative review of case reports, paroxetine has been postulated to work better (Hayashi et al. 2004). Our patient of delusional parasitosis also responded well with paroxetine and aripiprazole. Two of our patients also responded with mECT. Evidence are mostly in the form of case reports for the use of antipsychotics in somatic delusions which leaves its treatment tailored as per the individual symptomatology and the judgment of the clinician. Our case series might add value by highlighting treatment options which in turn might add sparse literature on somatic delusion which can be further helpful for clinician in deciding treatment.

Patients presenting in late 30s and onwards normally can be seen in clinical practice to present more commonly with somatic delusions which have a nihilistic theme or many a times linked with hypochondriacal delusional belief almost touching the thin line between somatic delusion vs hypochondriasis vs somatisation. These patients show minimal response to antidepressants or even antipsychotics, and many a times needs to be given Modified ECT sessions (Leong et al. 2015). Similar phenomenology of somatic delusion has been observed in our cases 3 & 4 which responded to mECT sessions along with pharmacotherapy (antipsychotic plus antidepressants). The mechanism by which ECT shows response in somatic delusion per se is ambiguous but can be postulated akin to its effect in psychosis. (Cohen et al. 2019). It is postulated that long-term structural change in the limbic system and in the prefrontal cortex along with role in altering regional cerebral blood flows and metabolic rates is probable mechanism of mECT in somatic delusion (Yatham et al. 2000, Dukart et al. 2014, Nobler et al. 2004). There are specific impaired neuronal networks and reduced cerebral blood flow associated with top- down sensory control in such conditions. Hypometabolism seen in bilateral frontal-parietal-temporal association cortex in a patient of schizophrenia with Cotard's delusions, which is a cluster of somatic delusions (Kramer et al. 2020). ECT is known to alter cerebral blood flow in these regions and thus improve somatic delusion (McGilchrist & Cutting 1995). The phenomenology of somatic delusions has been well recognized, and the issues surrounding treatment options are unresolved. Here we had compared the different phenomenologies with treatments options available which were effective in the patients based solely on their presentations.

For all psychosomatic diseases, the ability of an individual to adapt to the disease depends on the nature of cognitive representations developed before the disease. Cognitive representations can be adaptive or maladaptive. The patient, by means of conscious information processing and behaviour modification, draws attention to a new interpretation of his or her own situation. It seems crucial to have a non-confrontational and accommodative approach. Most of studies have advocated initial sessions focusing on long talking session and emotion valence and establishing link between stressors, somatic belief and its misinterpretation and then gradually in later sessions challenging the delusional belief.

In studies done by Hepworth et.al, 2011 has shown promising results in delusional disorders as an adjunctive therapy however long interval follow up studies on efficacy of CBT in somatic delusional disorder is still warranted.

The major limitation of our cases illustrated remain the inadequate duration and dosage of pharmacological agents tried as well as inadequate follow up makes it difficult to conclude about response to treatment. Other limitation being presence of comorbid medical and psychiatric symptoms influencing the phenomenology of somatic delusion in one of our cases (Index case 4). In future studies may include cases where regular and long

term follow up is feasible, so that more robust findings could be generated for clinical implications.

To conclude, these cases demonstrated the phenomenological aspect of different types of somatic delusion and emphasizes that conventional pharmacological therapy along with mECT which can be tried in cases showing inadequate response to medications, although literature evidence is sparse for mECT in this group of patients. Empirical treatment with combination of antipsychotics with SSRIs is often employed. More evidence is needed to produce clear treatment guideline for persistent delusional disorder (in particular somatic delusion).

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