

continued long-term treatment. In patients with moderate-to-severe depression symptoms at baseline, lumateperone treatment was associated with marked improvement in CDSS scores. These data are consistent with and extend data previously reported in placebo-controlled studies in patients with acute schizophrenia treated with lumateperone.

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### Between a Rock and a Hard Place: Challenges in Treating Patient with Phagophobia and Comorbid Panic Disorder and Severe Anorexia

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**ABSTRACT:** Phagophobia is a rare form of psychogenic dysphagia; it is characterized by an intense fear of swallowing food. It is a disorder which may be potentially life threatening if left untreated. Different effective approaches regarding the management for phagophobia have been documented in the past. However, there have not been sufficient data to support a definitive treatment. We would like to present a case which phagophobia, along with the presence of panic disorder and severe anorexia increase the difficulty in patient management.

Patient is a middle-aged female with history of anorexia nervosa and panic disorder. She presented with an eight-month history of inadequate caloric intake which was related to her fear of gaining weight and being preoccupied with intense fear of intake of food and medications; she stated that her throat was burning in attempt to swallow solids. She also stated that she felt like she had a “lump” in the throat. Her intake of food was limited to only certain types of food. However, after eating, she would engage in purging behaviors. Her hospitalization was complicated by multiple panic attacks in a day.

Patient underwent diagnostic interventions that helped us ruled out the other underlying causes of her symptoms: physical examinations, laboratory findings, bedside swallowing evaluation and esophagogastroduodenoscopy. These evaluations indicated that her symptoms were not caused by a medical condition or physiological effects of a substance. Daily medications aided with Anxiolytics as needed were prescribed for managing her symptoms. Non-pharmacological managements following the recommendations of the expert in positive behavior support were performed aiming to treat her symptoms.

Due to intense fear of swallowing, she was not able to take oral medications for panic disorder, and the effect of psychotherapy for eating disorder was limited due to frequent recurrence of panic attacks. She had not shown

improvement of her symptoms: inadequate daily energy intake and medication, non-compliance to oral medications. Her BMI dropped from 14 to 13 over the course of 8 months and the symptoms of panic disorder persisted, and she is at risk of medical emergencies.

In this report, we present the challenges in managing a patient with multiple psychiatric comorbidities, where each illness increased the difficulty of treating another illness. We had reviewed case reports which indicated that cognitive behavioral techniques may be beneficial to patients with phagophobia. However, the effects of non-pharmacological managements were limited as patient's psychiatric illness prevented her from completing each session. To this date, there has been no report of treatment success in a patient whose situation is similar to hers. Further research, clinical trials, and additional data collected in the future may provide new insights into management of this therapeutic challenge.

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### Challenges in Differentiating Between Obsession and Delusion in Schizophrenic Patients: A Case Report

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**ABSTRACT:** Schizophrenia is a serious, chronic mental illness that manifests a variety of symptoms: hallucinations, delusion of grandiose, disorganized behaviors, and neurocognitive decline after each episode. Among the patients with schizophrenia, obsessive-compulsive symptoms (OCS) or obsessive-compulsive disorder (OCD) are two relatively common comorbidities (25% and 12.5%, respectively). The appearance of these comorbidities complicates patient management: selecting the suitable pharmacological treatment may be challenging as delusion and obsession have similar presentation in this population. We would like to present a case which we suggest that differentiation between obsession and delusion will result in a positive impact on disease management.

Patient was a middle-aged male with history of Schizophrenia and status post skin grafting. He presented with delusions, auditory hallucinations and disorganized behavior. During his hospitalization, he spent much portion of a day slapping or hitting his wound. He would not follow staffs' recommendations regarding wound care as he believed that his behavior would lead to diminishing his pain from skin grafting and shorten the recovery time. He was treated with psychotropic medications, antidepressants aided with medication for pain. Despite adequate pain management, appropriate dosage of

anti-depressants and psychotherapy his self-injurious behavior persisted throughout the course of his hospitalization.

In this report, we presented the challenges in managing compulsive behavior in a patient with Schizophrenia. To date, OCD and OCS are diagnosed based on clinical presentations, which results in difficulty in patient management especially when the illness is complicated by Schizophrenia. Patient was assessed with Yale-Brown Obsessive-Compulsive Scale on multiple occasions which the results indicated that he had subclinical OCD. However, the validity of the test is questionable as it is a test for severity of OCD; If his compulsive behavior was due to delusion rather than obsession, YBOCS should not be applied since it is limited to the patients with OCD.

We propose that there is a necessity of developing a diagnostic intervention that may aid the differentiation between delusion and obsession in Schizophrenic patients. Genetic testing, for example, may be one of the potential diagnostic interventions to utilize clinically: A recent study, "Serotonin system genes and obsessive-compulsive trait dimensions in a population-based, pediatric sample: a genetic association study" by Sinopoli et al, has demonstrated a possible correlation between obsessive-compulsive spectrum disorders and serotonin gene variants. Although genetic testing of OCD is at its early stages and many aspects are yet to be discovered, it is optimistic to believe that potential benefits of the genetic test is tremendous as it will provide physicians a clearer picture in designing a treatment plan for this patient population.

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### Comparison of Traditional Therapy Versus Biofeedback for Tension Type and Migraine Headaches

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**ABSTRACT:** The effectiveness of biofeedback therapy in treating headache has been explored in various clinical settings. However, few studies in the literature focused on well-diagnosed patients who failed properly applied analgesic treatment. The aim of the study is to explore whether the combination of biofeedback and analgesics is more effective than analgesics alone in treating patients with pharmacologically uncontrolled tension type headache and migraine. The hypothesis is that the combination of biofeedback and analgesics is more effective than analgesics alone in treating patients with uncontrolled tension type headache and migraine.

Electromyographic and thermal biofeedback was utilized as an add-on treatment for 25 patients whose tension type headache and migraine was pharmacologically uncontrolled. The effect of the combination therapy was compared with the treatment effect of 25 similar patients, who continued receiving pharmacological treatment alone. All the subjects from the two groups were randomly selected from the pool of patients with uncontrolled tension type headache and migraine. The progress of two groups was closely monitored and data was collected for statistical analysis, which consists of Chi Square, non-parametric ANOVA, and Mann-Whitney U test.

Some positive results were observed from the group of patients receiving combination therapy of biofeedback and analgesics, including: reduced use of analgesics, reduced muscle tension, reduced pain score, decrease in intensity, frequency, and duration of headache. These positive outcomes were rarely observed from the comparison group, in which pharmacological treatment was continued alone.

The results indicate that the addition of biofeedback to standard analgesic therapy may be more effective than analgesics alone in treating patients with uncontrolled tension type headache and migraine. Further research is suggested to validate these findings and improve treatment effectiveness.

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### Treating Fibromyalgia Syndrome through Neuromodulation With Transcranial Magnetic Stimulation

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**ABSTRACT:** Fibromyalgia Syndrome (FM) affects 2-4% of the US adult population. It is a disorder characterized by widespread musculoskeletal pain accompanied by fatigue, disrupted sleep, memory and mood issues. Researchers believe that FM amplifies painful sensations by affecting the way the brain processes pain signals. In recent years there is converging data favoring the theory of a dysregulation of pain processing in the central nervous system of FM patients, particularly associated with an increase in cerebral glutamate levels. Traditional medications have not proven to be enough. Since 2017, Keays Medical Group has used neuromodulation with Transcranial Magnetic Stimulation to treat FM patients with comorbid major depressive disorder. Preliminary results have shown improvement in all standardized scoring measures including FIQ-R, GAD-7 and PHQ-9 when treated with our FMS Protocol.