

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.