



AN ESTIMATION OF EFFICACY OF SUPPLEMENTAL TRIPTORELIN FOR THE TREATMENT OF OCD IN PATIENTS TAKING SELECTIVE SEROTONIN REUPTAKE INHIBITORS

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Abstract

Introduction: OCD or obsessive compulsive disorder is a neuropsychiatric illness that is affecting the quality of life of many people around the globe. The signs and symptoms of the disease hamper the normal functioning of the patients. Hence, many researches are conducted to enhance the treatment regimen for this disease.

Objective: the aim of this study is to assess the role of triptorelin as an additional or supplemental therapy in patients suffering from OCD and these patients are taking SSRIs like benzodiazepines for the treatment of this disease

Method: this is a single blinded randomized control trial study conducted for a period of nearly 2 years. A group of 96 patients were selected and they were further divided into treatment and control group to assess the effects of triptorelin administered intravenously thrice a month at 0,4,6,8 and 20 weeks

Results: this study has revealed that administration of triptorelin has improved the signs and symptoms of the diseases and the patients treated with triptorelin have better Y-BOCS scores than control group. Hence, triptorelin has the potential to be used as a supplementary therapy in addition to SSRIs for the management of OCD.

Keywords: triptorelin, OCD, GNRH analogues

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Introduction:

Obsessive compulsive disorder is a heterogeneous neuropsychiatric disorder which takes a significant toll on the quality of life of people. This disease can start as an acute, eISSN1303-5150

sporadic or chronic condition but the recent advances in medical sciences have made its treatment sufficiently possible ¹. Recently OCD has been separated from all other anxiety disorders and classified under the name of www.neuroquantology.com



“obsessive- compulsive and related disorders”. This allocation of a separate group has greatly enhanced the understanding and knowledge of this significantly prevalent disease with an estimated prevalence of 2-3% ². The patients suffering from this disease are usually characterized by presence of repetitive intrusive thoughts and recurrent stereotypical attitude which is often ignored and left unrecognized adding to the disease burden of the world ³. Many studies have proved that signs and symptoms of OCD emerges due to various changes in the neural connections of the brain tissue with key affected areas are amygdale, prefrontal cortex and thalamus. These abnormalities are reposted in vast majority of the cases and many environmental as well as genetic factors also play a significant role in the causation of this disease ⁴. Pharmacological agents are considered the key agents in the management of OCD and SSRIs are considered most effective treatment options for OCD as that have high efficacy and effectiveness ⁵. Despite the proven effectiveness of SSRIs in the management of OCD, there is evidence available for the cases of OCD which have shown minimal to no response to treatment with SSRIs ⁶. Moreover, the prolonged use of SSRIs makes the patients prone to a large number of side effects ranging from nausea, vomiting and diarrhea to serotonin toxicity or serotonin syndrome. As a result, a constant is underway to find out pharmacological agents with maximum efficacy against sign and symptoms of OCD with reduced side effects profile ⁷.

Many studies have proven that gonadotrophin releasing hormone has a role in promoting patho-physiology in obsessive compulsive disorder and it has given birth to a hypothesis that certain anti-androgenic pharmacological agents likecyproterone acetate, flutamide and triptorelin can prove effective against OCD ⁸. Over the years various studies has provided evidential data on the promising response of anti-androgenic drugs against sign and symptoms of obsessive compulsive disorder ⁹.

Triptorelin is an agent commonly used for managing various reproductive disorders as it has a beta II turn structure that enhances its stability and strengthens its binding with GnRH receptors ¹⁰. As a result this product has great bioavailability and prolonged duration of action with minimal elimination. However, there are only few studies available that have tried to explore the efficacy and effectiveness of triptorelin in management of OCD especially in patients taking SSRIs ^{11,12}. This study tries to tests the role of triptorelin as an adjunct therapy alongwith SSRIs in the management of OCD.

Methodology

This study is performed during the period of October 2020 to December 2022 by on patients presented at outdoor patient department of XYZ hospital. This study has adopted a randomized controlled trial method with single blinded approach. A total of 98 patients were included in this study and an inclusion and exclusion criteria was outlined before the start of the study. All the selected patients were diagnosed with OCD and Yale brown OCD scale was used to assessment the sign and symptoms of the disease and the patients with a sole of greater than 17 on Yale brown OCD scale were included in the study. All the patients were between the ages groupof 30 to 45 years of age with history of regular intake of SSRIs as a cornerstone treatment of OCD were included in the study. Similarly, the patients with the history of presence of more than one psychiatric disorderwere excluded from the study. Any patients with the history of substance abuse, drug sensitivity reactions, use of medicines other than SSRIs and history of pregnancy and lactation were excluded from the study. All The included members of the study were guided about the procedure about the study and a written informed consent was taken. Keeping in view the ethical considerations, this study was approved by the ethical committee of XYZ hospital and informed consent was taken in written. Similarly, all the

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patients were ensured about confidentiality of their details in every step of the study

All the patients were interviewed by psychiatrists to confirm the diagnosis of OCD and this interview was structured on the basis of guidelines in diagnostic and statistical manual of mental disorders (DSM-5). The diagnostic criterion was designed and it has following key features. The diagnosis of OCD was established on the basis of presence of obsession or compulsion or both in patients that is time consuming and significantly damaging the life of quality of life of patients. Moreover, the sign and symptoms were not linked to any other psychiatric disorder and not considered to be the outcome of overuse of any substance like drugs.

All the patients included in the study were divided in two groups labeled as control group and treatment group. A specific therapeutic regimen was designed in which three injections of triptorelin were given in a month to

treatment groups by using single blinded technique. All the patients in the treatment groups were also administered one SSRI agent. All the patients who could not tolerate the drug administrations were excluded from the study. After giving the treatment all of these patients were assessed at 0, 4, 8, 12 and 20 weeks after the end of treatment by using Y-BOCS scale to assess the response of patients to the treatment with triptorelin.

Results

The results of this study states that the demographic features of the population under study are significantly comparable. The comparative analysis of the sample of the study on the basis of the gender, marital status and education status shows that both the groups have nearly same demographic characteristics. Similarly, both treatment and control group shares comparative figures for the previous family history of OCD as shown in table 1.

		Treatment group	Control group
Gender	Male	23 (47.91%)	22(45.83%)
	Female	25 (52.08%)	26(54.16%)
Marital status	Married	27 (56.25%)	31(64.58%)
	Unmarried	21(43.75%)	17(35.41%)
Education status	Primary	9(18.75%)	11(22.91%)
	Secondary	14(29.16%)	17(35.41%)
	h secondary	18(37.5%)	8(16.67%)
	Graduate	7(14.58%)	12(25%)
Family history of OCD	Present	19(39.58%)	22(45.83%)
	absent	29(60.41%)	26(54.16%)

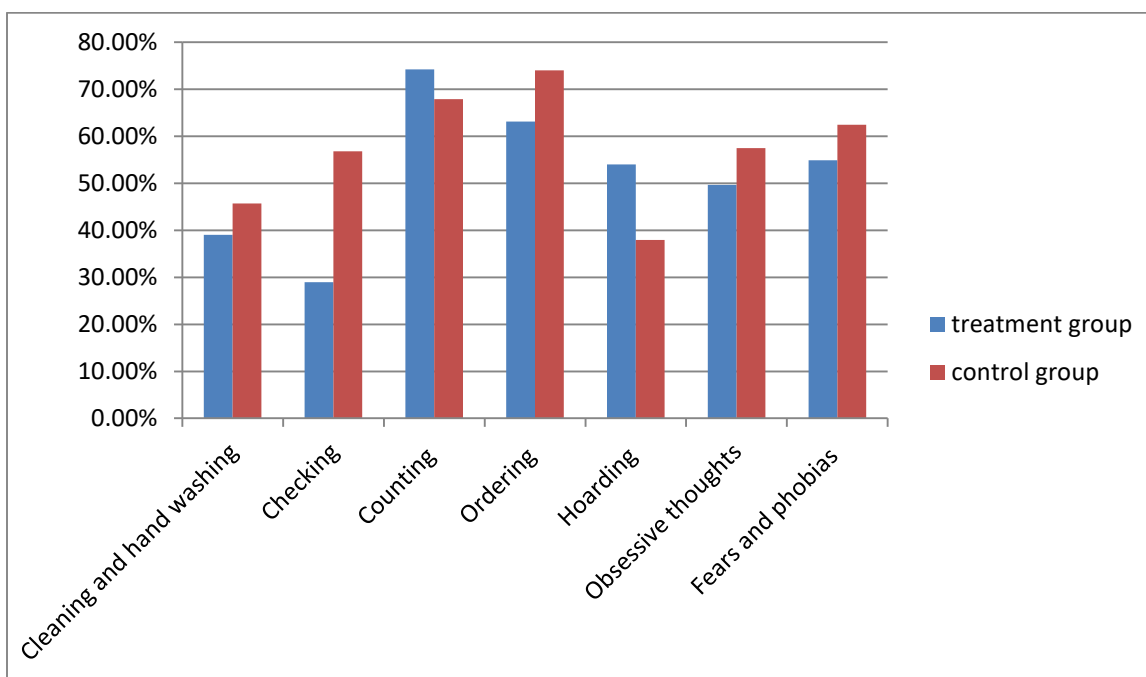
Table 1: demographic features of sample of study

Signs and symptoms of OCD	Treatment group	Control group
Cleaning and hand washing	39.04%	45.73%
Checking	28.97%	56.83%
Counting	74.23%	67.89%
Ordering	63.17%	74.03%
Hoarding	54.02%	37.94%



Obsessive thoughts	49.68%	57.46%
Fears and phobias	54.91%	62.43%

Table 2: prevalence of sign and symptoms of OCD in sample of study



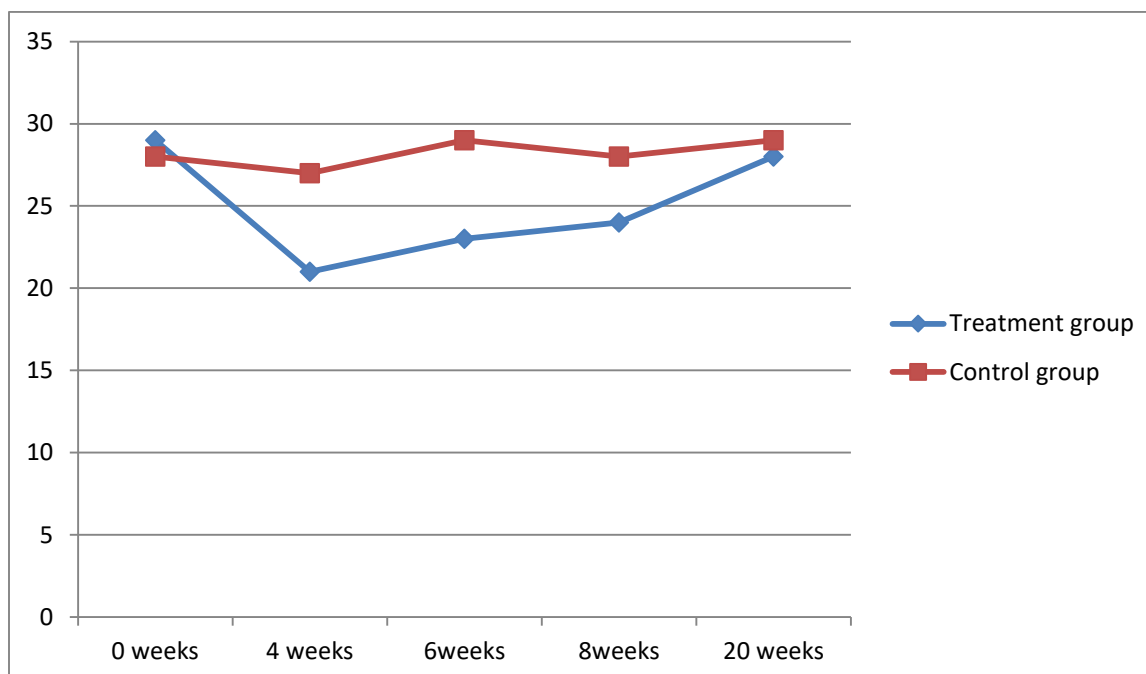
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Graph 1: graphical representation of signs and symptoms of OCD in sample of study

Y-BOCS scores	Treatment group	Control group
0 weeks	29 ± 3	28 ±1
4 weeks	21 ±2	27 ±3
6weeks	23 ±3	29 ±2
8weeks	24 ±2	28 ±3
20 weeks	28 ±3	29 ±2

Table 3: comparatively analysis of impacts of triptorelin on OCD





Graph 2: graphical representation of the effects of triptorelin impacts on sign and symptoms of OCD

In addition to the demographic features, an analysis of sign and symptoms of the disease also show that both treatment and control group nearly similar types of signs and symptoms of the disease as well as their prevalence as shown in table 2 and graph 1. On the other hand the assessment of Y-BOCS score at 0 week after onset of treatment with triptorelin shows that in treatment group the score is 29 ± 3 while in control group the score is 28 ± 1 as shown in table 3. At 4 weeks the Y-BOCS scores in treatment groups is reduced to 21 ± 2 while the scores in control group persisted at 27 ± 3 . At 6 weeks the scores in treatment group were further changed to 23 ± 3 while in control group the scores at 6 weeks after onset of the study were 29 ± 2 . At 8 weeks the scores in treatment were stood at 24 ± 2 and the score in control group were at 28 ± 3 . Similarly, at 20 weeks the score in treatment group were at 28 ± 3 and the scores in the control group were at 29 ± 2 as shown in graph 1.

Discussion

This study has elaborated that the addition of triptorelin as an adjunct therapy to the treatment of OCD in patients taking SSRIs has produced promising results. The addition of triptorelin has resulted in reduction in sign and symptoms of OCD in a month and its effects lasted for nearly 12 weeks. On the other hand the control group continue to reported high Y-BOCS scores, the patients taking triptorelin has shown a significant reduction in the sign and symptoms of OCD. This has proven that triptorelin is an anti-androgenic drug but it can be used as a supplementary treatment to OCD along with SSRI as it will help to relive many side effects of the disease as well as produce better compliance¹³. Similarly, it will help to overcome resistance to the SSRIs and improve the quality of life of the people suffering from this debilitating disease¹⁴. This study has provided evidential support to the claim that GnRH analogues can help in treatment of neuropsychiatric disorders especially OCD¹⁵. Moreover, it has elaborated the role of an emerging anti-androgenic drug that is triptorelin in the treatment and management of



patients suffering from OCD¹⁶. However, further studies are also required to enhance the understanding about pharmacokinetics and pharmacodynamics of triptorelin in patients suffering from OCD. Similarly, enhanced elaboration of the side effects profile of this is also the need of the hour to ensure the therapeutic range of this drug¹⁷. This study also has some limitations including the restricted time constrains of this study and the limited sample of the study. Hence further research on this topic can help in advancing the treatment regimen available for OCD.

Conclusion

This study has concluded that triptorelin can prove helpful in the management of sign and symptoms of OCD. This drug can play a phenomenal role in improving quality of life of patients suffering from this disease. However, this study also has some limitations but its promising results encourage further research on this topic that might prove helpful in advancing the treatment regimen of OCD.

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Conflict of interest

The author shares no conflict of interest

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