

A Brief Review on Rabbit Syndrome

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ABSTRACT

Rabbit syndrome is a rare condition affecting only a small amount of psychiatric patients who are under antipsychotic treatment. This syndrome is characterized by fine, rapid, rhythmic movements along the vertical axis of mouth accompanied by lip sound and these movements occur with a frequency of approximately 5Hz. This syndrome is a late onset extra pyramidal side effect occurring 2- 5% of patients who were chronically treated with neuroleptics. Usually it occurs more in females older than 40years and twice predominant than males. Providing the empirical treatment by considering the neuropathological aspects of the patients may enhance the quality of life. To improve the treatment options, advanced research on the neurophysiological and pharmacological aspects are required.

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Introduction

Rabbit syndrome is a rare condition affecting only a small amount of psychiatric patients who are under antipsychotic treatment. This syndrome is characterized by fine, rapid, rhythmic movements along the vertical axis of mouth accompanied by lip sound and these movements occur with a frequency of approximately 5Hz. This syndrome is a late onset extra pyramidal side effect occurring 2-5% of patients who were chronically treated with neuroleptics. Usually it occurs more in females older than 40 years and twice predominant than males. It was first described by Villeneuve in the year 1972.

Causes

It mainly occurs due to the exposure of older neuroleptics for a longer period. Recently, it was observed that newer antipsychotics can also develop Rabbit syndrome. Various studies showed that there is a relation between older antipsychotics and rabbit syndrome. Use of high potency neuroleptics with low anticholinergic activity like haloperidol causes rabbit syndrome in most cases. It is usually seen after years of therapy and more prominent with high potency drugs like haloperidol, fluphenazine and pimozide. Rabbit syndrome occurs with low incidence rates with drugs like thiodazine, clozapine, olanzapine, aripiprazole and with low doses of risperidone [1].

Clinical Features

In Rabbit syndrome, oral and masticatory muscles movements are involved but not the tongue [2,3]. The chewing motion resembles like rabbits and hence it is named as "Rabbit syndrome". The movements of Rabbit syndrome differ from tardive dyskinesia in which slower and less regular movements are observed [4]. Rabbit syndrome affects only the buccal region, which involves the stereotyped involuntary movements. Evidences were showing that both the features of Parkinson's disease and tardive dyskinesia can be seen in rabbit syndrome [5-7]. In fatigue, anxiety and stressfull conditions the movements of Rabbit syndrome increases [8].

The exact pathophysiology of this syndrome is unknown [9]. Rabbit syndrome occurs due to the results of hyper cholinergic state from the blockade of dopaminergic neurons in the extra pyramidal system [4]. Due to high serotonin type 2 and dopaminergic type 2 receptors and low affinity of anticholinergic muscarinic receptors may be the reason for developing Rabbit syndrome. Rabbit syndrome symptoms are similar to that of parkinsons disease and cessation of symptoms are same to that of tardive dyskinesia. Rabbit syndrome can be distinguishable from typical oral dyskinesia that involves the slower and less regular movements by the tongue which can be suppressed voluntarily by patients.



Rabbit syndrome varies from other oral dyskinesias like buccolingual and buccolinguo-masticatory syndromes, in which Rabbit syndrome cannot be suppressed voluntarily by patient [10].

Treatment

Treatment for rabbit syndrome is empirical and understanding the neuropathology is required. The steps involved in the treatment include (i) reduce the dose of the antipsychotic drug (ii) prescribing an accurate drug to reduce the symptoms [5]. Rabbit syndrome responds to anticholinergics like benzotropine, biperiden, procyclidine and trihexyphenidyl [1]. This syndrome usually disappears after the initiation of anticholinergic agent and the symptoms may reappear after the discontinuation of anticholinergics [10]. Durst successfully treated Rabbit syndrome by shifting the patients from zuclopenthixol (typical neuroleptic) to olanzapine [11]. Olanzapine started with a dose of 5mg and titrated up to 10mg every day showed a significant improvement in recovering from this syndrome and psychotic symptoms. A case report revealed that risperidone induced Rabbit syndrome was not responded to anticholinergics and this syndrome was improved after switching to the drug quetiapine. After 4 weeks of course with quetiapine with a dose of 100mg/day and increased up to 700mg, showed a significant improvement [12]. Drugs with high anticholinergic properties like clozapine/olanzapine can be the most preferable treatment options for Rabbit syndrome [13].

Conclusion

As the symptoms of Rabbit Syndrome are similar to Parkinson's disease, psychiatrists along with the other health care professionals should carefully do the differential diagnosis in dealing with this syndrome. Providing the empirical treatment by considering the neuropathological aspects of the patients may enhance the quality of life. To improve the treatment options, advanced research on the neurophysiological and pharmacological aspects are required.

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