

Compulsive checking behavior of quinpirole-sensitized rats as an animal model of Obsessive-Compulsive Disorder(OCD): form and control

ABSTRACT

Quinpirole induces non-irrepressible checking behavior, which can be suspended. The animal model of OCD compulsive checking in the preparation for quinpiroles is strengthened.

INTRODUCTION

In this paper we describe a novel approach to study OCD in rodents, which we call Compulsive Checking Behavior (CCB) in rats. The aim of this paper is to examine the effects of CCB in an animal model of OCD.

Methods:

CCB was induced in rats by intraperitoneal injections of the selective serotonin reuptake inhibitor (SSRI) fluoxetine (40 mg), and chronic CCB was used as a model of OCD. The animals were divided into three groups: (i) CCB-treated rats, (ii) CCB-treated rats treated with fluoxetine, and (iii) CCB-treated rats treated with saline. The CCB Compulsive checking is the most common symptom of OCD, with 63% of patients reporting this disorder. This condition is more prevalent than schizophrenia or panic disorder and can interfere with normal daily functioning by requiring them to perform certain rituals for hours on end. We propose in a recent publication that chronic treatment with quinpirole may lead to an animal model of OCD checking. The research shows that rats treated with the drug successfully display ritualistic behavior, which is comparable when treating other individuals with similar conditions. We investigate whether quinpirole rats exhibit compulsive checking behavior, which is another trait of OCD compulsions. However, some patients may resist participating in rituals for different durations depending on the circumstances. This property is also found in ERP therapy, an effective psychotherapeutic approach that encourages patients to expose themselves to ritual-provoking cues and remain in contact with them until any discomfort occurs, producing brain changes comparable to those observed with drug treatment. To test the effectiveness of suppression against obsession, we placed quinpirole rats in a cage in the open field and tested whether their familiarity with the cage or unfamiliarity at the time was enough to suppress checking behavior.

CONCLUSION

Remarkable conclusions Just as compulsive behavior induced by quinpirole in OCD patients is not irreversible but can be suspended in the presence of appropriate stimuli. However, when checking-evoking cues persist, the suspension of this behavior is no longer sustained, and rats resume checking behavior after a period of time. This results in similar findings for the preparation of quinchillarilla dishes, an animal model of OCC.