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CASE REPORT

Risperidone and Carbamazepine Combination in Treatment of Klüver-Bucy Syndrome: A Case Report

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ABSTRACT

Klüver-Bucy (KBS) syndrome is a rare neurobehavioral disorder, characterized by hypersexuality, hyperphagia, hyper-orality, visual agnosia and placidity. Here I present a case of A-21-year-old Saudi female with a Kluver-Bucy syndrome secondary to left unilateral parieto-temporal tumor resection who responded to a combination of carbamazepine and risperidone.

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INTRODUCTION

Klüver-Bucy (KBS) syndrome is a rare neurobehavioral disorder, characterized by altered sexual behavior, hyperphagia, hyper-orality, visual agnosia, hypermetamorphosis, and placidity. Some features of Klüver-Bucy syndrome (i.e., hypermetamorphosis, hyperorality, placidity) continue indefinitely, whereas the other symptoms resolve after few years Klüver-Bucy syndrome is usually resulting from bilateral damage of the anterior portion of a temporal lobe, especially the amygdala. The damage to amygdala can be due to multiple etiologies, including traumatic brain injury, degenerative brain diseases, tumors, anoxia-ischemic encephalopathy, hypoglycemia, heat stroke, acute intermittent porphyria and infections such as tuberculosis or herpes simplex encephalitis [1, 2, 3].

Heinrich Klüver and Paul Bucy described monkeys behavioral changes following bilateral temporal lobectomy at the end of the 1930s [4]. Klüver-Bucy syndrome classified according to ICD-10 (International Classification of Diseases 10th Revision) as a personality change due to known physiological condition. Here I report a case of Kluver-Bucy syndrome secondary to left unilateral parieto-temporal tumor resection.

CASE PRESENTATION

A -21-year-old Saudi female underwent surgical resection of a well-defined tumor in the left parieto-

temporal region at 2014, complicated by permanent bilateral blindness. She was stable until July/2017 when she admitted to a medical ward as she was complaining of Seizure, headache, and visual hallucination.

The patient discharged one month later with a stable condition on the following medications: Topiramate 75 mg BID, Oxcarbazepine 300 mg BID, Levetiracetam 250 mg BID, Escitalopram 10 mg OD, Risperidone 4mg OD.

The patient presented to the clinic on January/2018 and was complaining of: Increased oral intake, increased weight (gained 30 KG over the past 6 months), hyper-orality (tendency to touch objects by mouth), hypersexuality (sexual instincts in the form of stroking sex organs), aggression (verbal aggression by using inappropriate words toward her family associated with physical aggression) and poor sleep. The patient also complains of psychotic symptoms (auditory and visual hallucination of 2 strangers, with a delusion of getting pregnant from them).

The patient denied any history of depressive symptoms, manic symptoms, smoking or other substance use. The patient known case of hypothyroidism on levothyroxine 100 mcg OD {T4: 11.4 (12.0 - 22.0) PMOL/L, TSH: 4.270 (0.270 – 4.200) UIU/ML}.

There is no history of neurological or mental illness in the family.

The patient was given carbamazepine 200mg BD, and risperidone increased to 6 mg OD. Her symptoms including psychotic features, hyper-orality, and hypersexuality, were decreased. The patient discharged after four weeks.

Discussion

First human cases of Klüver-Bucy syndrome were recognized at the initially of the 1950s, as bilateral temporal lobectomies performed by surgeons to treat seizures. Although the anatomical basis of KBS is controversial, the most common involved region is the bilateral mesial temporal lobes [5, 6, 7]. Klüver-Bucy syndrome also results from the nervousness of the circuits between prefrontal cortex and limbic system which are important in memory, behavior and emotion regulation [8, 9].

Klüver-Bucy syndrome does not happen in isolation; it typically occurs as part of a complex psychological and neurological changes that include amnesia, psychosis, and seizures.

The clinical manifestations of The Klüver-Bucy syndrome in human are similar to those in monkeys, but it is rare to have a full syndrome as in monkeys. Inappropriate sexual hyperactivity was the most common KBS symptom, followed by a change in dietary habit and hyper-orality. Visual agnosia was the least reported. In 50% of cases, the patient fully recovered from KBS. Libido frequently increases in patients who have unilateral temporal lobe resection and may become pathological [10, 11].

The cure of Klüver-Bucy syndrome is difficult, and there is no specific medication for treatment of Klüver–Bucy syndrome. Carbamazepine, leuprolide, antipsychotics, and antidepressants like selective serotonin reuptake inhibitors have been found to reduce the behavioral symptoms in some patients with KBS [12, 13, 14].

The patient discussed in this paper responded well to a combination of carbamazepine and risperidone which is an atypical antipsychotic.

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