

# **Serum Oxytocin Level among Male Patients with Opioid Dependence and its Relation to Craving**

## **Abstract**

**Introduction:** Oxytocin, a known hormone and neurotransmitter, has been lately known to be involved in the drug addiction cycle especially during developing tolerance, in relation to craving and during withdrawal.

**Objectives:** The aim was to assess serum oxytocin level in patients with active opiate dependency in comparison to abstinent patients and healthy controls and its relation with craving among patients and abstinent patients.

**Methods:** A consecutive sample of 30 opiate dependent patients who fully meet the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria for opiate dependence, in addition to 30 patients fulfilling DSM-5 criteria of opiate dependence with at least 6 months of abstinence were assessed regarding serum oxytocin levels, craving levels using immunoassay kit and brief substance craving scale, respectively. They were compared to each other and to a sample of 30 healthy controls matching both groups.

**Results:** There was a statistically significant difference between the patient's group and the control group in serum oxytocin levels ( $p < 0.05$ ) but not between the other two groups i.e. patient versus abstinent and abstinent versus controls. Craving levels showed a statistically significant difference between the patient's group and the abstinent group ( $p < 0.001$ ). A negative correlation was found between oxytocin level and craving in the abstinent group ( $p < 0.05$ ).

**Conclusion:** The interaction between serum oxytocin levels and craving should be considered when dealing with opiate dependent patients as they affect and are affected by opiate dependence. Further studies regarding how to implement this during patient's treatment should be considered.

Keywords: Oxytocin, addiction, opiate dependence, craving