

## **CASE REPORT**

# **Naltrexone-Induced Weight Gain**

**Sunny T. Varghese and Rajesh Sagar**

Department of Psychiatry, All India Institute of Medical Sciences, New Delhi 110 029, India.

Corresponding author: Dr. Sunny T. Varghese, Resident, Dept. of Psychiatry, All India Institute of Medical Sciences, New Delhi 110 029, India, E-mail: [sunny\\_tv@rediffmail.com](mailto:sunny_tv@rediffmail.com)

### **Abstract**

*Naltrexone is used in the long term maintenance treatment of opioid dependence with limited success. We would like to report a patient who was contemplating stoppage of treatment due to uncontrolled weight gain (German J Psychiatry 2006;9:60-61).*

*Keywords: weight, naltrexone, opioids*

*Received: 2.2.2006*

*Published: 10.3.2006*

---

**N**altrexone is an opioid antagonist used in the long term maintenance treatment of opioid dependence. Despite being efficacious, poor retention rates of patients on treatment is a matter of concern. The various reasons for poor compliance on treatment include dysphoria, sexual dysfunction and the absence of any agonist action for the medicine. We describe a patient with significant weight gain on naltrexone and contemplating stoppage of maintenance treatment.

A 35 year old married woman with 2 children presented with a complaint of eight year history of injection pentazocine use. She was using around 6 ampoules of pentazocine daily and used to inject it both intravenously and intramuscularly. She had developed tolerance and had significant craving for the medication. When she is off medication she would develop lacrimation, rhinorrhea, anorexia, body ache and occasionally diarrhea. Due to the significant socioeconomic dysfunction and multiple failed abstinence attempts she was admitted and detoxified using dextropropoxyphene. Patient was detoxified in a week and patient was counseled about naltrexone. The patient weighed 52 kg at the time of initiation of treatment with a Body Mass Index (BMI) of 22. She was discharged on twice a week regimen of naltrexone with 50 mg/ day. After 6 months of naltrexone treatment she was abstinent from opioids but the patient had put on 15 kg weight. She was euthyroid, gynecological evaluation and ultrasound of abdomen was within normal limits. She was not on any other medicine and she did not report any change in appetite or diet pattern. Medical and endocrine referral did not reveal any cause for the unexplained weight gain. The

patient was very distressed with the weight gain and she was contemplating stopping the treatment.

Naltrexone is known to cause weight loss and reduce appetite in humans (Atkinson et al., 1984). The endogenous opioid systems are thought to influence regulation of body weight and appetite and the antagonist action of naltrexone may be responsible for the weight loss. It has also been suggested to be useful in preventing weight gain following the stoppage of smoking. But the effect of naltrexone on body weight is far from clear. It was reported that there was an absence of weight loss in males while women had a mean weight loss of 1.7 kilogram while on naltrexone (Atkinson et al., 1985). There is a paucity of literature on the effects of naltrexone on body weight in human beings and it has not been reported from any agonist maintenance program centers for opioid dependence. Chronic administration of naltrexone in Syrian hamsters was associated with significant weight gain and increased appetite (Jones et al., 2003). The weight gain caused by naltrexone in our patient was a major deterrent for treatment. More studies need to be done to assess the effects of opioid antagonists on weight gain and appetite in humans.

### **References**

Atkinson RL. Endocrine and metabolic effects of opiate antagonists. *J Clin Psychiatry* 1984; 45:20-4

Atkinson RL, Berke LK, Drake CR, Bibbs ML, Williams FL, Kaiser DL. Effects of long term therapy with naltrexone on body weight in obesity. *Clin Pharmacol Ther* 1985; 38:419-22

Jones JE, Corp ES. Effect of naltrexone on food intake and body weight in Syrian hamsters depends on metabolic status. *Physiol Behav* 2003; 78:67-72