

ILLICIT DRUG INDUCED CUSHING SYNDROME

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Introduction: Opioid abuse is relatively common in Iran (1). The pattern of use is changing toward more dangerous routes (injection) and types (heroin) of addiction (2). In 2005, a new version of locally produced illicit opioid vials, so called Norgestic, appeared in the illicit market (3). Later, some cases suffered Cushing's-like problems were reported (4). Typical clinical features of Cushing's syndrome include weight gain with truncal obesity and supraclavicular fat deposition, wide purple striae, and proximal muscle weakness (5). This study aimed at defining the overall pattern of Cushing syndrome, and determining the contribution of illicit steroid abuse in its prevalence. **Methods:** All cases admitted with suspected Cushing Syndrome/disease from 21st April 2002 and 21st September 2007 was studied prospectively. **Results:** Cushing syndrome was accounted for 71 admissions in the period of study. No deaths were recorded. Among them, 28% were chronically using steroids, 16% were smoker and 12% were illicit drug dependent. Mean (SD, min -max) age was 37.2 (14.6, 19.2 (17, 4-67) years. A female predominance (71%) was found. Mean weight gain was 14 (6) kg, systolic blood pressure 133 (28), diastolic 86 (15) mmHg, WBC 9512 (5060) and PMN 63 (19%). In their past medical history; history of hypertension (70%), striae (64%), moon face (58%), diabetes (52%), weakness (46%), hyperlipidemia (24%), edema (21%), insomnia (16%), lack of potency (16%), other endocrine diseases (15%), amenorrhea (14%), ecchymosis (14%), Proximal myopathy (14%), polyuria (14%), acne (12%), back pain (9%), poly dipsia (7%), goitre (6%), gynecomastia (5%), avascular head of femur necrosis (4%). There were no difference in steroid users and non steroid users for blood pressures, diabetes, addiction, clinical finding were not significantly different. **Conclusion:** Illicit steroid abuse is contributing in Cushing syndrome prevalence. The clinical findings of illicit steroid abusers are similar to other Cushing syndrome/diseases. **References:**
1. Afshari R et al. *J Toxicol Clin Toxicol* 2004;42:965-75. 2. Afshari R et al, *Clinical Toxicology*, 2006, 44:4; 581-582. 3. Afshari R, Afshari R, *Proceeding of 26th European Association of Poisons Centres and Clinical Toxicologists (EAPCCT)*, Czech Republic, 2006, 177-178. 4. Koushesh et al, *Drug and Chemical Toxicology*, 2009 Apr;32(2):114-119. 5. Nieman LK (2002) Diagnostic tests for Cushing's syndrome, *Ann N Y Acad Sci*, 970; 112-8.

A prospective case series was designed to evaluate 18 Norgesic-dependent subjects who volunteered for abstinence therapy in a rehabilitation clinic from November 1, 2005, to December 30, 2005. In this study, we aimed to describe the clinical and paraclinical findings in detail and define the potential determinants of this Cushing's syndrome outbreak. History, physical examination, plasma cortisol level, and urine screen tests were used to describe the patients. All subjects were male with a mean (SEM) age of 29.8 +/- 1.6 years. The opioid-dependence period was 8.4 +/- 0.9 years. In an average of 4.7 +/- 0.3 months, subjects increased their usage to 5.5 +/- 0.5 vials a day. Patients claimed to gain weight. Striae were seen in 38.9%, previously documented psychological problems in 33.3%, weakness in 27.8%, high systolic blood pressure in 22.2%, moon face in 16.7%, hirsutism in 11.1%, extensive dermal infection in 11.1%, gynecomastia in 5.6%, back pain in 5.6%, insomnia in 5.6%, and lack of potency in 5.6%. Their cortisol level, on average, was 4.8 +/- 1.1 microg/dL. Hepatitis C virus was positive in 22.2%. Urine-screening tests were positive for morphine and negative for buprenorphine. In conclusion, these new vials contain steroids as well as opioids. This combination could be more dangerous than opioids themselves.

Results: Poisonous plants accounted for **31** cases. No deaths or ICU referral were recorded. Mean (SD) age was **33.3 (14.8)** years. A male predominance (**70%**) was found. One case referred to ICU. Most common poisoning were datural stremonium (**??%**), Most common clinical manifestation were **?? (32%), ?? (28%), (16%), and (8%)**. On admission, mean systolic and diastolic blood pressures were **123 (17)** and **73 (10)** mmHg respectively, heart rate was **78 (17)** bpm, respiratory rate was **19 (11)** bpm and temperature was **37 (0.4) C**. CPK was **519.1 (425.5)** U/L, CPK-MB was **40.6** U/L and Creatinin was **10.3 (2.0)** mg/L.

Troponin was also positive in 2 cases.

ECG findings included **PR 148 (39) mSec, QRS duration 61 (15) mSec, and QTc 412 (35) mSec**. **ST segments were elevated in 39% and depressed in 19% of cases in at least two of the leads. CPK, however, was significantly higher in patients with ST depression (P=0.017, n=29) or ST elevation (P=0.05, n=29) in at least one lead. Also almost all high CPK MB cases showed ST depression or ST elevation, but not vice versa.**

Conclusion: **CPK, CPK MB and Troponine can be used to predict potential cardiologic complications in spider bite.**

