INTRODUCTION

“Chasing the Dragon” is slang for smoking of heroin, a process that originated in Hong Kong in the 1950s. Heroin powder is heated on tin foil and the thick, rippling vapor (evoking a dragon’s tail) is “chased” and inhaled through a straw. This method of heroin ingestion is rising in popularity worldwide as it eliminates the risks of blood-borne transmission through needle-sharing and bacteremia from injection, while affording users an intense intoxication. Leukoencephalopathy is an uncommon complication of heroin ingestion that is mostly associated with this method of inhalation rather than alternate injecting or snorting practices. Here we present a case of a young female who presented with acute respiratory failure and encephalopathy after smoking heroin.

CASE DESCRIPTION

A 29-year-old female with past medical history significant for Buerger’s disease and polysubstance use presented after being found all over her face and only minimally responsive to painful stimuli. Patient was hypoxic with oxygen saturations of 50% and bag-and-mask ventilated in transit to an outside hospital. On arrival to ED, patient was administered Narcan and was subsequently transferred to Vidant Medical Center MICU. Further workup revealed a type 2 myocardial infarction and chronic HCV infection. Spot and continuous EEG demonstrated moderate to severe encephalopathy but no epileptiform activity. CTH demonstrated nonspecific hypodensity of left internal capsule. MRI brain revealed diffuse bilateral white matter signal abnormality consistent with leukoencephalopathy.

Diagnosis of HLE is clinical and should be suspected in patients with history of heroin use (especially via inhalation) who present with acute onset of neurological abnormalities, such as neurobehavioral changes or with cerebellar, pyramidal, or extrapyramidal signs. Brain biopsy is the gold standard for diagnosis but is limited outside of autopsies.

Proposed inclusion criteria:
- Presence of clinical syndrome suggestive of leukoencephalopathy
- Positive heroin toxicology
- Heroin use confirmed by patient or witness
- Supportive neuroimaging
- Neuropathology findings consistent with spongiform leukoencephalopathy

Although there is no known cure for HLE, the patient benefited somewhat from antioxidants and physical rehabilitation. She was able to start speaking and transition to an oral diet. Despite a lengthy hospital course of over 200 days, the patient was not able to return to either her mental or physical baseline.

DISCUSSION

HLE is a rare complication of heroin inhalation that carries a 67% mortality in severe cases and is increasing in prevalence as the patterns around heroin use change. Although there is no proven treatment, antioxidant therapy is recommended and patients who survive often require physical and drug rehabilitation.

REFERENCES


