LEGAL, BUT IS IT SAFE? CASE OF RECURRENT ACUTE KIDNEY INJURY ASSOCIATED TO SYNTHETIC CANNABIONOID USE

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A 19 year old Mexican American man without prior medical problems is brought to Methodist Dallas Medical Center after being found unconscious in a parked car following an apparent seizure. Physical exam revealed an obtunded patient with stable vital signs, pinpoint pupils, but no apparent trauma. Rest of exam was unremarkable. Immediate treatment included naloxone and intubation with mechanical ventilation for airway protection. Head CT scan was normal. Initial lab results revealed BUN of 12 mg/dL, creatinine 1.35 mg/dL. After aggressive volume expansion creatinine came down to 1.15 mg/dL. Urine toxicology was negative.

On second day of admission, patient became anuric, despite aggressive volume expansion and normotension. Creatinine levels started to uptrend steadily (up to 7.48 mg/dL) and required hemodialysis due to hyperkalemia and volume overload on the third day of admission. Patient had bland urine sediment with FENa of >1. Renal sonogram revealed normal size kidneys and patient was not exposed to any nephrotoxic agents. Kidney biopsy was considered due to AKI of unkown etiology, but then patient's parents confessed that patient had been abusing synthetic marijuana known as K2 or Spice.

K2 is a drug in which herbs, incense or other leafy materials are sprayed with lab-synthesized chemicals to mimic the effect of tetrahydrocannabinol (THC) and are marketed as "safe," legal alternatives to marijuana. It is not detected on urine toxicology screens. Side effects include nausea, vomiting and hallucinations. Very few case reports have been published linking K2 with acute tubular necrosis (CJASN Dec 2012).

At discharge, patient's renal function returned to normal with creatinine levels of 0.98 mg/dL. Interestingly patient has been admitted twice in last two months with AKI associated to K2 overdose and after each discharge goes home with normal creatinine levels supporting our suspicions that synthetic cannabinoids are responsible of this patient's AKI. Every Nephrologist should be aware of this relationship.