

## **Acute Kidney Injury and critical limb ischaemia associated with the use of the so called “legal high” 3-Fluorophenmetrazine**

**Michael Fawzy<sup>1</sup>, Wei San Wong-Morow<sup>1</sup>, Anthony Beaumont<sup>1</sup> and Chris KT Farmer<sup>1,2</sup>.**

<sup>1</sup>Kent and Canterbury Hospital, East Kent Hospitals University NHS Foundation Trust, United Kingdom

<sup>2</sup>University of Kent, United Kingdom

Drugs previously known as ‘legal highs’ also referred to as ‘research chemicals’, ‘new psychoactive substances’ (NPS) or ‘club drugs’ are chemicals that have similar effects to illegal drugs but until very recently remained legal to purchase in the UK. Many drugs had been made illegal under the misuse of Drugs Act 1971. This provision was insufficiently broad to legislate for the actions of some modern chemists’ intent on circumventing the law. The problem was that as soon as a new drug was identified, the Home Office placed a temporary ban on the chemical while it decides whether the drug should be permanently banned. By the time agents are banned chemists had responded by slightly altering the molecular structure making a new subtly different drug with similar effects. Crucially the fact that these drugs were legal does not mean that they are safe or approved for human use, many vendors labelled them as ‘not fit human consumption’. On 26<sup>th</sup> May 2016 the Psychoactive Substances Act came into force it making it an offence to ‘produce, supply, offer to supply, possess with intent to supply, possess on custodial premises, import or export psychoactive substances; that is, any substance intended for human consumption that is capable of producing a psychoactive effect. The maximum sentence will be 7 years’ imprisonment’. Fluorophenmetrazine (3-FPM) also known as PAL-593 was introduced onto the market via the internet in around 2014 since that time it has become increasingly popular. The drug won the VICE Netherlands Designer Drug Awards 2014 “Newest Drug of 2014 Award”. It was legal in the UK until May 2016; it had already been made an illegal substance in Switzerland and Sweden. 3-FPM is one of many phenylmorpholines designed to treat obesity or ameliorate drug dependence. It is suggested that it has properties similar to amphetamines associated with monoamine release. There are many unofficial reports of effects available on the internet, supplied by users. It seems that the majority of reported effects are as a stimulant, however there are few reports of its precise action. We report a case of dialysis dependent acute kidney injury, four limb ischaemia resulting in bilateral lower limb amputation and loss of digits on his left hand, this occurred as a result of injection of 3-FPM intravenously. This was the first use of this drug by the patient, it was purchased as an alternative to Methiopropamine(MPA).

michael.fawzy@nhs.net