Treprostinil overdose

OS

Various toxicities: case report

A 58-year-old woman developed various toxicities following an accidental overdose of treprostinil.

The woman, who had CREST syndrome, oesophageal motility impairment, Raynaud's syndrome, and severe pulmonary hypertension, had previously obtained an implantable pump [Lenus Pro] to enable continuous parenteral administration of treprostinil for her pulmonary arterial hypertension (PAH). The pump required a monthly refill. Due to lack of adherence to the standardised refill procedure, she received an instantaneous administration of a 1-month supply of treprostinil subcutaneously instead of into the pump reservoir. This resulted in a dose of > 100mg given over 1 minute, which was equivalent to a 1000-fold overdose. She experienced circulatory collapse within minutes.

The woman was treated with epinephrine [adrenaline] and terlipressin and she was admitted to an ICU. A non-quantifiable amount of treprostinil was recovered using local puncture and repeated rinsing of the area. She received high doses of vasopressor agents for excessive hypotension. Cardiac arrhythmias were treated with potassium, calcium, and amiodarone. She also experienced motor unrest, agitation, pain, flush, and dyspnoea. Her condition required instalment of a central venous access, sedation, full monitoring, fluid balance, an oxygen nasal tube, and parenteral nutrition. She was able to be haemodynamically stabilised within 24 hours after her overdose. Treprostinil was restarted gradually thereafter with an infusion initially at a dosage of 10 ng/kg/minute and increased hourly by 2–3 ng/kg/minute. The target dosage was 40 ng/kg/minute. Her vasopressors were phased out. She left the hospital after 6 days and had no remaining impairment of health.

Author comment: "*The most critical period was the first 8 hours following inadvertent administration of an overdose 1000 times above the therapeutic level.*"

Hohenforst-Schmidt W, et al. Successful management of an inadvertent excessive treprostinil overdose. Drug Design, Development and Therapy 7: 161-165, 21 Mar 2013. Available from: URL: http://dx.doi.org/10.2147/DDDT.S42771 -
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