

# Common anaesthetic agent causing an uncommon side effect

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## DESCRIPTION

A 30-year-old man was brought to our trauma centre with a history of road traffic accident 1 hour back. He had sustained a right both bone forearm fracture and surgery in the form of open reduction internal fixation with plating was planned. The preoperative routine haematological and biochemical investigations revealed normal values and the patient was posted for surgery after achieving preanaesthetic fitness. General anaesthesia was induced with fentanyl and propofol 100 mg and maintained with nitrous oxide and vecuronium. Intraoperative period was uneventful with the fractures being treated with a 7-hole dynamic compression plate (DCP) for radius and a 6-hole DCP for ulna. Glycopyrrolate and neostigmine were used for the reversal of neuromuscular blockade. The patient was extubated successfully and transferred to the postoperative ward. Two to 3 hours postsurgery, the nursing staff noticed green-coloured urine, thereby alarming them and the other medical personnel (figure 1). Urinary tract infection (UTI) was suspected. After a thorough re-evaluation of the patient and his medications, the patient's urine was sent for analysis. Urinalysis revealed normal values of liver function tests and renal function tests and the following values—urobilinogen level: 0.7 mg/dL, specific gravity: 1.023, pH: 6.2, negative content of bilirubin, ketones and glucose, white cell count: 3 hpf. The normal urinalysis and the stable haemodynamic state of the patient confused us. Since neither did the patient suffer from UTI nor did any of the drugs received by him were known to cause green urine, we suspected that the intravenous infusion of propofol used for the induction of general anaesthesia would be the sole reason. The urine was monitored for the next 48–72 hours and duly returned to its normal colour with a repeat urinalysis revealing normal values too. Return of the urine to its normal colour coupled with a normal urinalysis confirmed our suspicion of propofol being the cause. The patient was discharged and is doing well.

Green discolouration of urine is an unusual phenomena and can lead to confusion and anxiety. Green urine can be associated with certain medications, dyes or UTIs. Medications containing phenol groups, such as promethazine, thymol, cimetidine and propofol and some non-phenol drugs, such as metoclopramide, amitriptyline and indomethacin, are known to produce green urine.<sup>1</sup> Propofol is a commonly used sedative agent for induction and maintenance of general anaesthesia but urine discolouration after propofol infusion and its clinical association is not widely known to clinicians because of its rare occurrence. Although the exact incidence of



Figure 1 Green-coloured urine.

## Learning points

- ▶ Green discolouration of urine is an unusual clinical finding.
- ▶ Though rare, it is benign and of little significance if not caused by urinary tract infections.
- ▶ Nursing staff and patients should be warned about this clinical finding to avoid any anxiety among them.

propofol-induced green urine is unknown, reported incidence is suggested to be <1%.<sup>2</sup> The green colour is due to the excretion of quinol derivatives resulting from renal sulfoconjugation and glucuroconjugation of propofol.<sup>3</sup>

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