

# Propofol-associated Green Hair Discoloration

Bridget P. Pulos, M.D., Hans P. Sviggum, M.D., Emily E. Sharpe, M.D.



Propofol is known to be associated with green discoloration of the urine.<sup>1,2</sup> A lesser known side effect is green discoloration of the hair.<sup>3</sup>

This photograph displays greenish-blue discoloration of a 60-yr-old male's normally silver-white hair in the recovery unit after an uneventful spinal anesthetic for a total hip replacement. Intraoperatively he received spinal bupivacaine in combination with a propofol infusion. During preoperative evaluation, the patient had reported a similar "blue hair" discoloration after a prior general anesthetic. Propofol (previously in bolus doses), fentanyl, and cefazolin were the only anesthetic agents used in both cases. The patient reported that this discoloration lasted approximately 1 to 2 months in both cases, despite cutting the discolored hair. As the picture shows, the color change was most pronounced around the temples, but his scalp did not show signs of discoloration.

Green urine discoloration is thought to occur *via* the propofol metabolites 4-sulfate and 1- or 4-glucuronide conjugates of 2,6-diisopropyl-1,4-quinol, which are renally excreted.<sup>1,2</sup> Although the mechanism for hair discoloration after propofol administration is unknown, it may involve phenolic metabolites excreted into hair-coating sebum, which is constantly produced by the sebaceous glands.<sup>1,3</sup> This would explain the short time frame from intraoperative propofol exposure to the appearance of greenish-blue hair in the recovery unit. One other case of propofol-associated green hair discoloration has been reported.<sup>3</sup> Anesthesia providers should be aware of this rare potential reaction to counsel patients about its benign and self-limited nature, although it may recur with subsequent propofol administration.

## Competing Interests

The authors declare no competing interests.

## Correspondence

Address correspondence to Dr. Pulos: pulos.bridget@mayo.edu

## References

1. Motsch J, Schmidt H, Bach A, Bottiger BW, Bohrer H: Long-term sedation with propofol and green discoloration of the liver. *Eur J Anaesthesiol* 1994; 11:499–502
2. Barbara DW, Whalen FX: Propofol induction resulting in green urine discoloration. *ANESTHESIOLOGY* 2012; 116:924
3. Callander CC, Thomas JS, Evans CJ: Propofol and the colour green. *Anaesthesia* 1989; 44:82

From the Department of Anesthesiology and Perioperative Medicine, Mayo Clinic College of Medicine, Rochester, Minnesota.

Copyright © 2019, the American Society of Anesthesiologists, Inc. Wolters Kluwer Health, Inc. All Rights Reserved. *Anesthesiology* 2019; 130:445