

Green Urine

Correct answer is B. Medications

Explanation:

Green discoloration of the urine is an unusual and intriguing medical finding. Either exogenous or endogenous causes should be considered in the differential diagnosis. Endogenous factors frequently implicated include infection with pyocyanin-producing bacterium, *Pseudomonas aeruginosa*, accumulation of the bilirubin degradation product, biliverdin, or the metabolic disorder, Hartnup disease.¹ Exogenous etiologies include medications, consumer products, and food dyes. Drugs are the most common culprit. One of the more established agents which produce green urine is the hypnotic agent propofol. The proposed mechanism of propofol-induced urine discoloration is the production of a phenolic chromophore intermediate that undergoes conjugation in the liver and is excreted by the kidneys.² Methylene blue was also described as a cause of green urine.³ To date, this agent is frequently used as a first line choice in the treatment of methemoglobinemia. In our case, methylene blue was presumably added to potassium nitrate in the aforementioned medication in order to prevent drug-induced methemoglobinemia. Additional compounds implicated in the formation of green-colored urine are the medications amitriptyline, cimetidine, flutamide, indomethacin, methocarbamol, metoclopramide, promethazine, and triamterene, as well as indigo blue dye, Listerine mouthwash and Clorets mints.^{3,4}

In conclusion, although green urine discoloration is an uncommon and often alarming finding, the underlying cause can usually be elucidated by means of a thorough history taking with emphasis on recent medication use as well as simple laboratory analysis of urine and blood specimens.

References

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2. Barbara DW, Whalen FX Jr. Propofol induction resulting in green urine discoloration. *Anesthesiology.* 2012;116(4):924.
3. Samo S, Parikh M, Sheth J, Krishnan S, Ganipiseti V. Treatment of methemoglobinemia resulting in green urine. *QJM.* 2014 Apr 27. [Epub ahead of print]
4. Gillett MJ, Burnett JR. Medications and green urine. *Intern Med J.* 2006;36(1):64-6.