

Conjunctival and Palmar Pallor

Alex Q. Lee, BA¹ and Paul Aronowitz, MD



Department of Internal Medicine, University of California, Davis School of Medicine, Sacramento, CA, USA.

J Gen Intern Med 36(11):3575–6

DOI: 10.1007/s11606-021-06981-5

© Society of General Internal Medicine 2021

A 65-year-old woman presented to the hospital with five days of intermittent hematochezia, left lower abdominal pain, weakness, fatigue, and dyspnea with minimal exertion. She also reported six months of intermittent vaginal bleeding. Her initial systolic blood pressure was 66 mmHg and laboratory studies showed a hemoglobin of 4.6 g/dL. Physical examination revealed pallor of the conjunctiva, conjunctival rim, and palms (Figs. 1 and 2). An abdominal computed tomography (CT) scan showed acute diverticulitis. A pelvic ultrasound and endometrial biopsy showed abnormal endometrial thickening but no malignancy.

Conjunctival rim pallor, conjunctival pallor, and palmar pallor have positive likelihood ratios (+LR) for anemia (hemoglobin < 11 g/dL) of 16.7, 4.7, and 5.6, which increase the post-test probability of anemia by 53%, 29%, and 33%, respectively^{1–3}. These findings are helpful for the diagnosis of anemia of any severity in patients of all skin colors. The patient refused blood product transfusion due to her religious beliefs and was treated supportively with erythropoietin 20,000 units for seven days, iron infusions, and minimization of blood



Figure 1 Conjunctival rim (arrows) and conjunctival (star) pallor.

draws. Her hemoglobin eventually recovered to 8.2 g/dL after three weeks of observation in the hospital, and she was discharged with a follow-up colonoscopy scheduled six weeks later.

Received March 29, 2021

Accepted June 10, 2021

Published online June 25, 2021

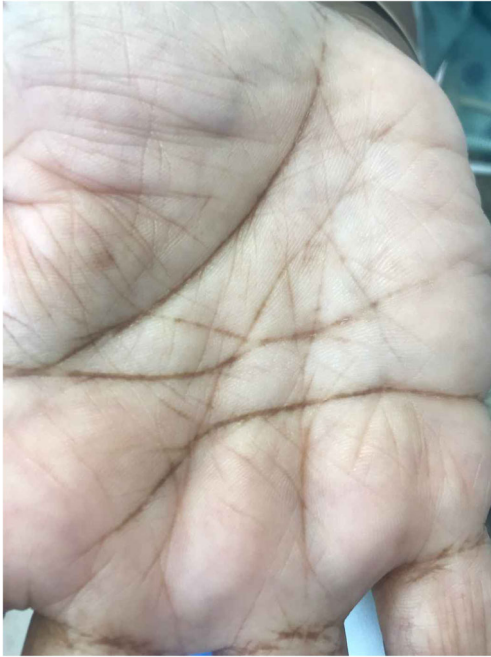


Figure 2 Palmar pallor.

Declarations:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

REFERENCES

1. **Sheth TN, Choudhry NK, Bowes M, and Detsky AS.** The Relation of Conjunctival Pallor to the Presence of Anemia. *J Gen Intern Med.* 1997;12:102-6.
2. **Stern SDC, Cifu AS, and Altkorn D.** Anemia. Symptom to Diagnosis: An Evidence-Based Guide, 4th Edition. New York: McGraw Hill Education; 2020.
3. **McGee S.** Simplifying Likelihood Ratios. *J Gen Intern Med.* 2002;17:647-50.

Publisher's Note: Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Corresponding Author: Alex Q. Lee, BA; Department of Internal Medicine, University of California, Davis School of Medicine, Sacramento, CA, USA (e-mail: aqlee@ucdavis.edu).