

Re-Evaluating Hematologic Monitoring for Lichen Planopilaris and Frontal Fibrosing Alopecia Patients Treated with Hydroxychloroquine

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Introduction

Hydroxychloroquine (HCQ) is an antimalarial drug widely used for autoimmune disorders such as rheumatoid arthritis and systemic lupus due to its immunomodulatory effects. These properties have supported its use in treating **autoimmune-related scarring alopecias, including lichen planopilaris (LPP)** and its clinical variant, **frontal fibrosing alopecia (FFA)**.¹ Clinical presentations show progressive, **patchy, scarring alopecia** with symptoms including severe pruritus, burning, follicular hyperkeratosis or plugging, and perifollicular erythema, particularly in postmenopausal women.^{2,3} HCQ has been reported to be well tolerated for these conditions, however, **laboratory monitoring practices** for HCQ in dermatology remain inconsistent.⁴ The aim of this study was to assess whether current monitoring guidelines could be appropriately applied to dermatologic patients receiving HCQ in the absence of adverse effects.

Objective

Evaluate hematologic risks associated with HCQ use in patients with LPP and FFA to inform appropriate laboratory monitoring guidelines in dermatologic practice.

Methods

- Retrospective analysis using TriNetX database
- Define cohorts by query criteria, including patients with LPP/FFA treated with HCQ compared to those receiving triamcinolone and exclusion of differential diagnosis.
- Hematologic parameters were selected for measurement, including erythrocyte count $<4.2 \times 10^6/\mu\text{L}$, hemoglobin $<12 \text{ g/dL}$, and hematocrit $<36\%$, which served as indicators of anemia.
- Incidence of each cohort for the following were measured: aplastic anemia due to external agents, other drug-induced pancytopenia, drug-induced autoimmune hemolytic anemia and drug induced hemolytic anemia.

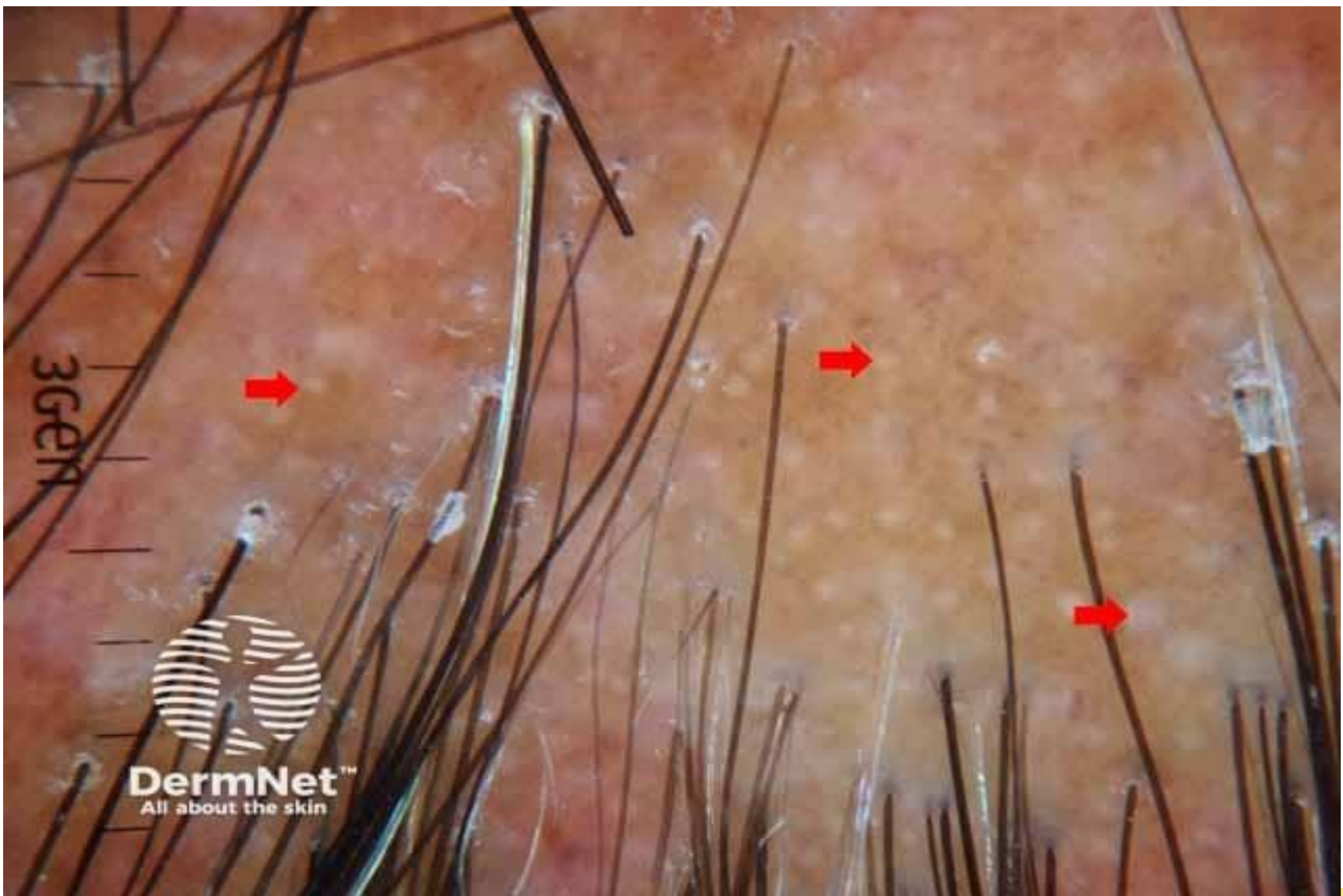


Figure 1. Dermoscopic Image of Lichen Planopilaris.⁷ Present with irregular distribution of follicular opening which indicates cicatricial alopecia.⁵

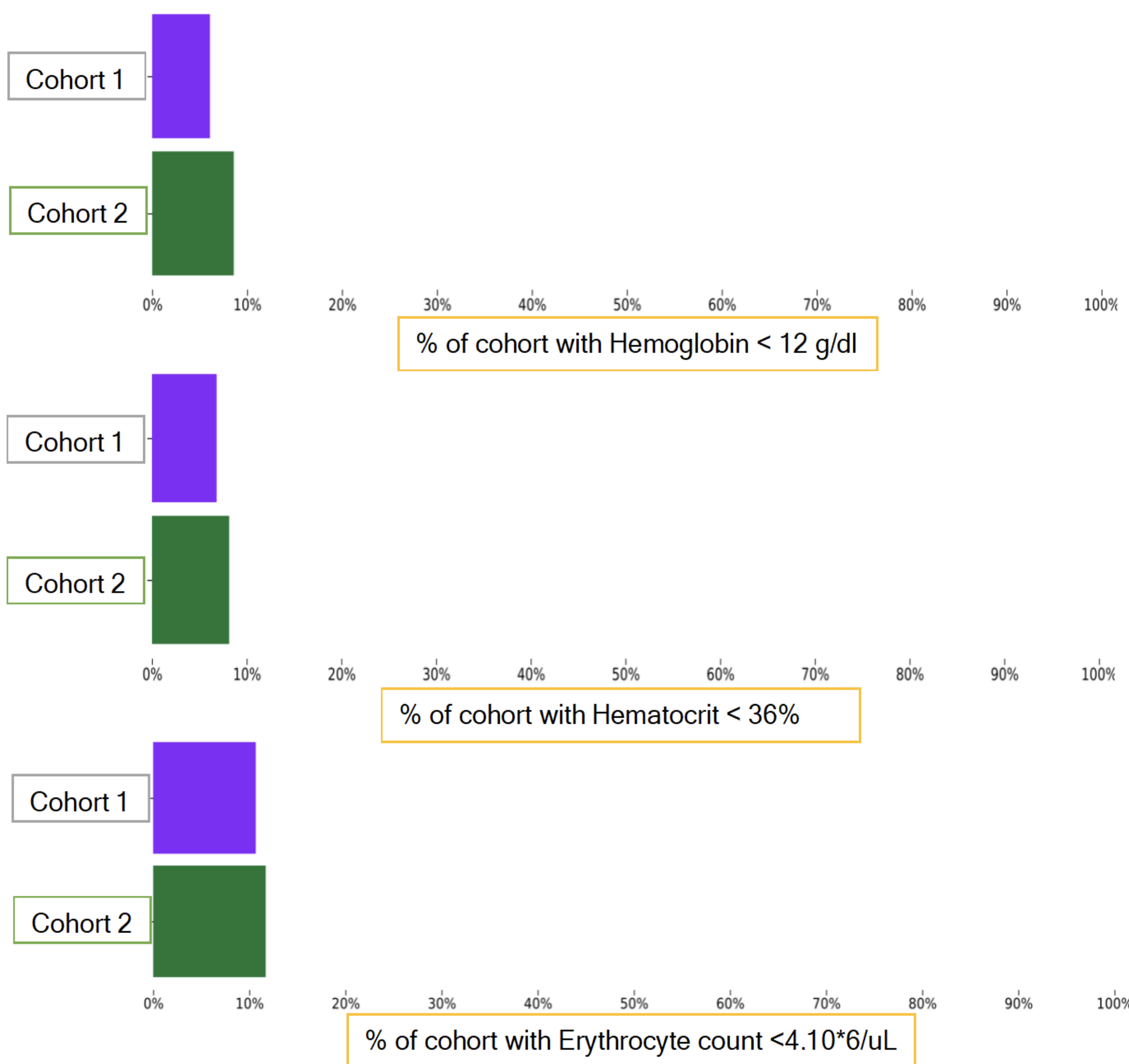


Figure 2. Percent of each cohort for the hematological parameters measured.
Cohort 1- LPP/FFA with HCQ Cohort 2- LPP/FFA with Triamcinolone

Results

Cohort 1 consisted of 675 patients treated with hydroxychloroquine (HCQ), while Cohort 2 (control) included 675 patients treated with triamcinolone. Anemia-related laboratory values were measured between the two groups. Hemoglobin levels below 12 g/dL were observed in 41 patients (6.1%) in the HCQ group and 58 patients (8.6%) in the control group. This difference was not statistically significant ($p = 0.076$). Hematocrit values $< 36\%$ were seen in 46 patients (6.8%) receiving HCQ and 55 patients (8.1%) in the control group ($p = 0.352$). Erythrocyte counts below $4.2 \times 10^6/\mu\text{L}$ occurred in 72 patients (10.7%) in the HCQ group and 79 patients (11.7%) in the control group ($p = 0.546$). No cases were identified in either cohort for the following diagnoses: aplastic anemia due to external agents, other drug-induced pancytopenia, drug-induced autoimmune hemolytic anemia, or drug-induced aplastic anemia.

Conclusion

Hydroxychloroquine treatment in LPP/FFA patients was not associated with a statistically significant increase in anemia-related lab abnormalities compared to triamcinolone. No cases of severe hematologic conditions were observed in either group. In the absence of dermatology-specific guidelines, rheumatology-based monitoring may be appropriate for patients on HCQ, with follow-up guided by individual comorbidities and concurrent medications.

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