Background. Patients on chronic minocycline suppression for orthopedic infections at a single institution were studied for development of minocycline-induced cutaneous hyperpigmentation and analysis of risk factors.

Methods. This is a retrospective cohort study of Mayo Clinic patients with hardware or non-hardware associated chronic orthopedic infections treated with long term minocycline suppression between 2002 and 2011. Long term minocycline suppression was defined as daily minocycline use for ≥ 3 months. Electronic medical records were reviewed for details pertaining to the relevant orthopedic infection, minocycline treatment course, development of hyperpigmentation if applicable, and dermatologic and clinical considerations. Cox proportional hazards model was used to evaluate specific dermatologic and clinical factors, including co-morbidities and concurrent medications.

Results. Of 291 patients, 53.6% developed hyperpigmentation, 87.8% of which was type II, which appeared most commonly in the lower extremities (74.5%), upper extremities (43.8%), and face (38.0%). Mean duration of suppression prior to hyperpigmentation was 549.08 days with a mean cumulative dosage of 107.26 g.

Notable risk factors for development of hyperpigmentation included a previous smoking history vs a history of never-smoking (RR 1.4, p = 0.039) or actively smoking (RR 2.5, p = 0.0027) at the time of minocycline initiation. Patients with knee prostheses were also at increased risk compared to those without a knee prosthesis (RR 2.1, p < 0.0001). A daily dose of 300 mg was associated with higher risk as compared to dosages of 200 (RR 30.8, p = 0.0281) or 100 mg (RR 120.0, p = 0.0079). Use of calcium channel (RR 1.48, p = 0.037) or beta blockers (RR 1.38, p = 0.0448) was associated with increased risk. Patients with vitamin D deficiency (RR 6.82, p = 0.0039), hematologic malignancies (RR 2.67, p = 0.0410), or benign prostatic hypertrophy (RR 2.31, p = 0.0046) were also at increased risk.

Conclusion. Minocycline-induced cutaneous hyperpigmentation is common with long term use in orthopedic infection patients. Higher daily doses of minocycline were strongly associated with increased risk of hyperpigmentation.

Disclosures. All authors: No reported disclosures.