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INFORMATION ON HYDROXYCHLOROQUINE (PLAQUENIL)

What is hydroxychloroquine?

- This drug, also referred to by a popular brand name “Plaquenil”, is a type of anti-inflammatory medication
- It used to treat some types of hair loss such as lichen planopilaris, pseudopelade, discoid lupus and frontal fibrosing alopecia.
- It is classified as an “anti-malarial” pill because certain closely related medications (i.e. chloroquine) are actually used to treat malaria infections in some parts of the world. Therefore, some physicians will refer to this medication simply as an anti-malarial.

Who should not take hydroxychloroquine?

Dr. Donovan will review if this medication is right for you. Patients with the following issues may or may not be recommended to take this medication:

1. patients allergic to the drug or the family of drugs
2. patients with some types of eye diseases
3. patients who are pregnant or breastfeeding
4. patients with myasthenia gravis
5. patients with G6PD deficiency
6. patients with psychotic illness
7. patients with psoriasis

What is the typical dose?

Dr. Donovan will review with you what dose is right for you.

- Many patients take a 200 mg tablet twice daily but this dose may not be right for everyone. Please review carefully the dose with Dr. Donovan
- Dosing is typically by lean body weight, meaning that lighter patients may use a lower dose.
- Dr. Donovan frequently uses the following guide for dosing. He will advise if this applies to you or not.

PLAQUENIL DOSING IN THE DONOVAN HAIR CLINIC

WEIGHT OF PATIENT (LBS)	DOSE I TYPICALLY USE
100	200 mg daily every day of the week
110	200 mg daily every day of the week
120	200 mg daily Monday to Friday; 400 mg on weekends
130	Alternate 200 mg and 400 mg
140	Alternate 200 mg and 400 mg
150	400 mg daily Monday to Friday; 200 mg on weekends
160	400 mg daily Monday to Friday; 200 mg on weekends
170	400 mg daily Monday to Friday; 200 mg on weekends
180 and above	400 mg daily

What are the side effects of hydroxychloroquine?

Dr. Donovan will discuss all possible side effects so you can decide if this medication is right for you

Side effects include:

1. **Eye changes.** This including vision changes, double vision. Frequent eye exams are required for anyone using hydroxychloroquine (Plaquenil). Rarely permanent changes in vision can occur due to the effects of hydroxychloroquine on the retina.
2. **Lowered blood counts.** Frequent blood tests will be needed for anyone using hydroxychloroquine. This allows Dr Donovan to monitor your blood cells counts and liver tests.
3. **Nausea, vomiting, diarrhea**
4. **Neurological problems.** This includes irritability, psychosis mood swings, headaches
5. **Skin color changes.** A brownish or even bluish color can occur including the face
6. **Worsening of one's existing psoriasis**
7. **Allergic reactions**
8. **Rarely Hair Loss.** Most people who feel that hydroxychloroquine is causing hair loss actually have another reason. True hair loss from hydroxychloroquine is not common.

Are any blood tests or other tests needed when starting hydroxychloroquine?

- Yes, blood tests will be ordered at the start of treatment and then periodically while you are on the drug. Generally, blood tests are done monthly for a few months. Dr. Donovan will advise the specific tests your need.
- You will be requested to get an eye examination before starting (or soon after starting) and then periodically while on therapy. New recommendations suggest that for healthy individuals with no risk factors, a baseline exam can be followed by a second examination at the 5 year mark. You may wish to read the following blog for more information.

ARTICLE 1: Hydroxychloroquine (Plaquenil): Am I taking too much?

Hydroxychloroquine is an oral medication used in a variety of autoimmune conditions. Side effects have been discussed previously but today we will focus on eye side effects. A number of side effects are possible ranging from vision changes to double vision to asymptomatic changes in various parts of the eye.

The Risk of Retinopathy with Hydroxychloroquine

"Retinopathy" is one of the more worrisome side effects of Hydroxychloroquine. At appropriate doses, studies show that the risk appears to be about 1 % of patients at 5 years of use and 2 % at 10 years. After 20 years, the risk may rise to 20 %. Once the retinal toxicity from hydroxychloroquine occurs, it is believed that the changes in the retina are permanent. Furthermore, the disease can even progress even if hydroxychloroquine is stopped

Risk Factors for Retinal Toxicity

Retinal damage can occur in anyone. However, the risk may be increased if the following risk factors are present

- Longer Duration of use (cumulative dose)
- Renal or hepatic functional impairment. Compromised kidney and/or liver function can lead to increased accumulation of hydroxychloroquine in the tissues.
- Age over 60 years.
- Preexisting retinal disease
- Concurrent tamoxifen therapy

What dose should I take?

It's clear that taking the appropriate dose reduces (but does not eliminate) the chance of side effects. The optimal dose is 6.5 mg for every kg of lean body weight (not simply what the patient weighs). "Lean body weight" is essentially the patients expected weight for their height and gender - it does not include the "extra" weight that some might carry. Instead of calculating lean body weight, some clinicians advocate simply using the patient's true body weight and multiplying by 5 (instead of 6.5). In our clinic we typically dose hydroxychloroquine according to the chart discussed above.

Conclusion

The risk of eye related toxicity is low in the first 5-10 years of hydroxychloroquine use provided the dosing is respected. This study has had great importance as it has further helped to define risk and has encouraged changes in screening guidelines. These guidelines now include an initial examination but dedicated yearly screening to begin only after 5 years in otherwise healthy individuals deemed at low risk for eye problems.

Reference

(1) Melles & Marmor. The Risk of Toxic Retinopathy in Patients on Long-term Hydroxychloroquine Therapy. *JAMA Ophthalmol*. 2014;132(12):1453–1460.

