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Title

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Journal

Dermatology Online Journal, 24(4)

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Publication Date

2018

DOI

10.5070/D3244039351

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Peer reviewed

Restrictions on blood donations relevant to dermatology

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Abstract

Over 36,000 units of blood are transfused every day in the US. With nearly 40% of the population eligible to donate, we may frequently treat potential blood donors. We reviewed the American Red Cross and World Health Organization's restrictions on blood donation. Multiple drugs used, and diseases treated in dermatology, are associated with blood donation restrictions. Understanding these restrictions may help us better educate our patients.

Keywords: isotretinoin, acitretin, finasteride, methotrexate, biologics, vismodegib, tattoo

Introduction

Systemic treatments used in dermatology are associated with a variety of side effects. One that may be overlooked is drug-induced limitation on blood donation. Someone needs blood about every 2 seconds in the US, which averages to over 36,000 units daily [1]. With nearly 40% of the US population eligible to donate, we may frequently treat potential blood donors [1]. Herein, we review blood donation restrictions associated with common dermatologic diseases (**Table 1**) and medications (**Table 2**).

Body of Article

Methods

We reviewed information on blood donation from the American Red Cross, UCLA, University of São Paulo, and the World Health Organization. We based most recommendations on Red Cross guidelines, as these are most relevant to patients' ability to donate blood in the United States.

Results

A skin rash does not necessarily preclude donation, as long as the phlebotomy site is unaffected [2]. Chlamydia, genital warts, and herpes simplex do not preclude donation if the patient feels well [2, 3]. Systemic infection generally precludes donation. Patients with chicken pox should wait 2-3 weeks after lesions heal [3, 4]. Individuals treated for Lyme disease can give blood after one month or disease resolution, whichever is longer [4]. After complete cure of lichen planus or herpes zoster, six months must pass before giving blood [3]. Syphilis and gonorrhea preclude donation for 12 months [2-4]. Chagas disease, babesiosis, leprosy, filariasis, systemic tuberculosis, systemic paracoccidiodomycosis, and leishmaniasis prevent donation indefinitely [2-4].

Treated basal cell or in situ squamous cell carcinomas do not impede blood donation [2, 3]. Patients with untreated skin cancer or lesions with pending biopsy results are ineligible to give blood until their issue is resolved [2]. If invasive squamous cell carcinoma is successfully treated with no recurrence, patients can give blood after 12 months [2, 4]. The diagnosis of malignant melanoma, Kaposi sarcoma, or mycosis fungoides imposes a permanent ban on blood donation [2, 4].

Chronic dermatological disease does not necessarily preclude donation if well-controlled [2]. Patients with uncontrolled, multi-organ autoimmune disease (i.e. severe psoriasis, lupus, scleroderma, dermatomyositis, systemic amyloidosis) are ineligible to donate [3, 4]. Patients with alopecia areata, cutaneous lupus, and vitiligo can give blood [3]. In contrast, a diagnosis of porphyria cutanea tarda, polycythemia rubra vera, hemochromatosis,

Table 1. Deferral periods for common dermatological disease.

Dermatological disease	Deferral after treatment or resolution
Chlamydia Genital warts Herpes simplex, oral or genital Alopecia areata Cutaneous lupus Vitiligo	None (regardless of treatment)
Basal cell carcinoma In situ squamous cell carcinoma	None
Untreated skin cancer Lesions pending biopsy results	Defer until treated
Chicken pox	2-3 weeks
Lyme disease	1 month
Lichen planus Herpes zoster	6 months
Syphilis Gonorrhea Invasive squamous cell carcinoma	12 months
Chagas disease Babesiosis Leprosy Filariasis Tuberculosis (systemic) Paracoccidioidomycosis (systemic) Leishmaniasis Malignant melanoma Kaposi's sarcoma Mycosis fungoides Porphyria cutanea tarda Polycythemia rubra vera Hemochromatosis Pemphigus vulgaris/foiaceus Uncontrolled, severe: Atopic dermatitis Psoriasis or psoriatic arthritis Systemic lupus erythematosus Scleroderma Dermatomyositis Systemic cutaneous amyloidosis	Permanent

pemphigus vulgaris or foliaceus, or severe atopic dermatitis is a permanent obstacle for blood donation [3-5].

Treatments may also preclude blood donation. Topicals for acne, rosacea, or eczema carry no risk. Patients with acne and rosacea treated with oral

Table 2. Deferral periods for common dermatological treatments.

Dermatologic Treatment	Deferral after last dose
Systemic corticosteroids Methotrexate Immunosuppressants (for autoimmune disease) Biologics Sterile tattoo or piercing Botox	None
Oral antibiotics	None, if no fever/infection
Lovenox Eliquis Xarelto Pradaxa	2 days
Heparin Fondaparinux Warfarin	7 days
Isotretinoin Finasteride	1 month
Gold therapy Skin surgery (under local anesthesia)	3 months
Dutasteride	6 months
Experimental drugs Non-regulated tattoo or piercing	12 months
Sonidegib or vismodegib	2 years
Acitretin	3 years
Etretinate	Permanent

antibiotics (e.g. doxycycline or minocycline) are able to give blood in the absence of a fever above 99.5F or active bacterial infection [2]. Isotretinoin use precludes blood donation for a month after the last dose [2, 3, 5].

Finasteride, used for androgenic alopecia, precludes blood donation for a month after the last dose. Dutasteride, on the other hand, has a 6-month waiting period post-therapy [2, 3, 5].

Methotrexate does not prevent blood donation, although some experts recommend waiting 1-3 months after therapy cessation [3, 5, 6]. Systemic corticosteroids, widely used for acute flares of autoimmune disease, do not prevent donation, although experts recommend waiting 2-14 days after the last dose to reveal any masked infection [2-4, 7]. Treatment with mycophenolate mofetil, other oral immunosuppressants, or biologics (i.e.

infliximab, etanercept, and adalimumab) does not preclude blood donation, though some recommend deferring until therapy completion [4, 6]. Acitretin precludes donation for 3 years after treatment is discontinued. Etretinate, removed from the U.S. market in 1998, permanently precludes donation [2, 3, 5]. Any patients taking experimental drugs should wait at least 12 months post-therapy before giving blood, unless otherwise specified by a medical director [2, 5].

Many dermatology patients may have cardiovascular disease treated with blood thinners [8]. Aspirin and clopidogrel delay platelet donation but do not restrict whole blood donation [2, 4, 5]. If heparin, fondaparinux, or warfarin is utilized, patients must wait 7 days after the last dose before giving blood. Only 2 days are required for the newer anticoagulants (Lovenox, Eliquis, Xarelto, or Pradaxa), [2, 5].

For skin surgery under local anesthetic (i.e. Mohs, excisions), patients must wait 3 months before giving blood, although some experts endorse donation after the wound is healed, stitches are

removed, and the patient has resumed normal activity [2-4]. Locally advanced or metastatic basal cell carcinoma may be treated with sonidegib or vismodegib, but patients must then wait for 2 years after stopping the drug to giving blood [2, 5]. If a cosmetic patient is administered Botox, the patient may give blood, although some experts recommend waiting a month [3]. Sterile body piercings are acceptable, however, there is a 12 month waiting period if completed at a nonregulated facility or with reusable instruments. If tattoos are inked at a state-regulated facility, patients may give blood. Otherwise, a 12 month waiting period applies [2, 3].

Discussion

We manage patients with a wide variety of acute and chronic dermatologic disease. With approximately 40% of the population eligible to donate blood, we may frequently treat potential donors. Understanding how these illnesses and subsequent treatments limit blood donation can help us better educate our patients.

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