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Review Article

Dermatologic Conditions Typically Diagnosed and Treated by Internists (Internal Medicine Specialists) and How They Differ from Those Treated by Dermatologists

Emmanuella Solomon[1] and Nicholas A Kerna[2,3]*

[1]*Obafemi Awolowo University, Nigeria*

[2]*SMC–Medical Research, Thailand*

[3]*First InterHealth Group, Thailand*

***Corresponding Author:** Nicholas A Kerna, (mailing address) POB47 Phatphong, Suriwongse Road, Bangkok, Thailand 10500. Contact: medpublab+drkerna@gmail.com.

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Abstract

Internists are specialists in internal medicine who diagnose and treat many adult diseases and conditions, including dermatologic conditions and disorders. However, the dermatologic conditions and disorders typically seen and treated by internists vary in degree and type from those typically seen and treated by dermatologists. Internal medicine patients are treated for herpes infection, benign lesions, insect bites, allergic reactions, urticaria, fungal, and bacterial skin infections (among others); whereas, Dermatologists tend to treat patients more frequently with seborrheic keratosis, actinic, and malignant skin tumors. Internists evaluate patients with various skin conditions from the innocuous and self-limiting types to severe and potentially life-threatening. This paper aimed to develop an abridged resource of skin conditions and disorders typically seen and treated by internists and how they differ in degree and type from those seen and treated by dermatologists—which, hopefully, benefits internists, internal medicine residents, or medical students (considering a medical specialty) as well as non-healthcare professional that may come upon this article.

Keywords: *Breast Cancer; Hives; Herpes; Histamine; Malignant Skin Tumor; Skin Disorder*

Abbreviations

ACE: Angiotensin-Converting Enzyme; AK: Actinic Keratosis; BCC: Basal Cell Carcinoma; SCC: Squamous Cell Carcinoma; UV: Ultraviolet

Introduction

Treatment scope of internal medicine

In general, internists provide treatment for most conditions and disorders *in adults*, including:

- Skin disorders
- Allergies
- Sinusitis and pharyngitis
- Asthma

- Emphysema
- Bronchitis
- High blood pressure (HBP)
- Elevated cholesterol
- Coronary artery disease (CAD)
- Congestive heart failure (CHF)
- Gastroesophageal reflux (GERD)
- Ulcers
- Infectious diarrhea
- Urinary tract infections (UTIs)
- Urinary incontinence
- Kidney stones
- Benign prostatic hyperplasia (BPH)
- Male erectile dysfunction
- Women's health concerns
- Anxiety and depression
- Arthritis and joint and bone disorders [1,2].

Internal medicine physicians provide treatment or referral for nearly every condition [3]. Differing from family medicine or dermatology, internal medicine centers wholly on adult medicine [4].

This paper focuses on skin conditions and disorders typically seen and treated by internists and how they differ in degree and type from those seen and treated by dermatologists. The purpose of this paper is to provide a concise resource that reinforces awareness—in internists, internal medicine residents, or medical students (considering a medical specialty)—of these typical skin conditions.

Discussion

Skin diseases comprise specific cutaneous disorders [5]. Patients with skin disorders are encouraged to consult with a dermatologist or internist (internal medicine specialist), having familiarity with such conditions and access to healthcare provider referral systems. Common dermatologic conditions seen by internists differ—in degree or type —from those seen by dermatologists [3,4]. Thus, this paper aims to emphasize typical skin conditions treated by internists and how they differ from those treated by dermatologists and aid in their identification, differential diagnosis, and referral parameters.

Typical dermatologic conditions diagnosed and treated by internists (benign and urticarial)

In internal medicine, patients are treated for herpes infection, benign lesions, insect bites, allergic reactions, urticaria, and fungal and bacterial skin infections [6]. More often than internists, dermatologists may see patients with seborrheic keratosis, actinic, and malignant skin tumors [7]. Nevertheless, every internist evaluates patients with varied skin conditions and, therefore, have full-spectrum knowledge of dermatologic disorders from the innocuous and self-limiting to the severe and potentially life-threatening [3–7].

Benign skin conditions consist of rash, growth, lesion, or tumor, but are non-cancerous, most rarely spreading to other parts of the body or tissues [8]. Many of these conditions are non-contagious and can affect patients of any age. Benign lesions or tumors can form on any area of the skin, and they are often presumed initially to be cancerous [8], **r**aising concerns and anxiety in the affected patient.

While breastfeeding, most women experience breast growth [9]; some, however, experience abnormal growth, causing alarm in the patient as the breast growth's underlying cause may be a severe medical condition [10]. Nontheless, after proper diagnosis, most unusual growths are determined to be benign and observed or treated conservatively [11,12]. According to research performed by Ghant., *et al.* (2016), eight out of ten women have experienced benign tissue growth on their breasts [13].

The causes of many benign lesions are unknown, but, as some researchers have determined, tumors occur when the body cells divide, resulting in excessive growth on the skin. The body is designed to balance this division and growth and replace any damaged tissues [14]. However, tumor formation can occur when the homeostatic mechanism is overrun or compromised [14–16].

Significant symptoms of specific, more aggressive tumors include chills, fever, weight loss, and fatigue [14–17]. Treatment of such lesions of the breast is typically through surgery after screening with a mammogram [18,19].

A urticarial skin infection, also referred to as hives, presents as a raised red and itchy rash, triggered predominantly by an allergen [20]. The body releases a protein (histamine) as an allergic reaction [21]. The histamines are distributed to the capillaries, where fluid accumulates, forming a rash [22]. Such a condition is non-contagious [22,23]. According to Abuabara., *et al.* (2018), about 25% of the world's population experience a dermatologic allergic reaction during childhood or adolescence [24].

The major activators of urticaria include specific medicines (antibiotics, aspirins, and ACE inhibitors), infections (influenza, hepatitis B, and glandular fever), foods (nuts and shellfish), and temperature changes [25]. Thus, patients prone to allergic reactions should avoid these activators. Treatment for hives is typically antihistamines (topical and or oral) for several days or more or until any pruritus, rashes, or lesions have lessened or been eliminated [26,27].

Typical dermatologic conditions seen and treated by a dermatologists (malignant skin tumors and actinic keratosis)

Malignant skin tumors, such as basal cell carcinoma (BCC) or squamous cell carcinoma (SCC), are cancerous, growing abnormally on sun-exposed skin tissues, triggered by prolonged and persistent exposure to ultraviolet (UV) radiation [28]. There are three primary types of skin cancers: BCC, SCC, and melanoma [29]. BCC occurs in sun-exposed skin areas, appearing as a waxy bump, scar-like lesion, or scabbing sore [30]. SCC presents as red nodules with a crusted and scaly lesion surface [31]. However, melanoma affects any skin area, first appearing as a nodule that becomes cancerous [32]. Early signs of melanoma include brownish spots that change color and sometimes bleed [33].

Exposure to UV radiation is the primary cause of malignant cell tumors; therefore, it is essential to minimize this risk factor [34]**.** In prevention and management, patients are advised to always wear sunscreen [35,36], ensure that the skin is well-covered when outdoors [37], and avoid tanning beds [38].

Actinic keratosis (AK), also known as solar keratosis, presents as scaly patches on the skin surface after prolonged exposure to the sun [39]. Signs of AK include wart-like bumps, varying from flat to one inch [40]. The bump may vary in shades from brown to pink, depending on the inherent skin color [40]. In suspected solar keratosis cases—being challenging to diagnose definitively [41]—referral to a dermatologist or skin specialist is advised [41,42]. Predisposing factors include prolonged sun exposure, a history of other skin cancers, and a weak immune system [37,43]. Similarly, as with other skin cancers, it is advisable always to wear sunscreen and minimize sun exposure [34–38,42].

Importance of the internists' practical knowledge of dermatologic conditions

Internists need to have practical knowledge of the full spectrum of skin infections, lesions, and cancers, determining if a condition is malignant or benign [44]. Furthermore, many patients exhibit re-occurrence of specific skin conditions, leading to tumors [45]. Thus, internists' fundamental knowledge of dermatologic conditions is required to enhance diagnosis and treatment outcomes [46]. Internists need to confidently differentially diagnose skin disorders and refer to an appropriate specialist when indicated, as in the case of cancerous or recurrent lesions**,** in patients age 40 and above, or those who have undergone cancer treatment [47].

Conclusion

On the whole, dermatologic conditions commonly seen by internists tend to differ in degree or type from those seen by dermatologists. Nonetheless, internists evaluate patients with various skin conditions from mild rashes to several carcinomas. Thus, they should remain skilled in the identification, differential diagnosis, and treatment of the full spectrum of skin conditions and use appropriate referral parameters when indicated.

Conflict of Interest Statement

The authors declare that this paper was written in the absence of any commercial or financial relationship that could be construed as a potential conflict of interest.

Supplementary Note

It was well beyond the scope of this paper to describe the diagnostic procedures and treatment protocols or provide images of specific dermatologic pathologies; the reader is referred to two notable reference books:

1. Illustrated skin diseases; an atlas and text-book with special reference to modern diagnosis and the most approved methods of treatment. Paperback – May 19, 2012;by William S. Gottheil (Author). Published by RareBooksClub.com (May 19, 2012).

2. Skin Infections: Diagnosis and Treatment. Hardcover – Illustrated, 6 April 2009; by John C. Hall, MD (Editor) and Brian J. Hall (Author). Published by Cambridge University Press; Illustrated edition (April 6, 2009).

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