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Most people with psoriasis or rosacea are not being treated: a large population study

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Abstract

When left untreated, psoriasis and rosacea can have long-term health and psychosocial implications. The purpose of this study was to estimate the percentage of Americans with psoriasis or rosacea who are not being treated. Patient data from a large claims-based database were analyzed to identify the number of patients who are treated for psoriasis or rosacea. The numbers of patients treated were compared to the estimated prevalences of these diseases in the general population, identified from previously published sources. Of the 18,632,362 patients in the database, 140,439 (0.75%) were seen for psoriasis and 165,130 (0.89%) were seen for rosacea. Based on published sources, 3.2% of Americans have psoriasis and about 5.0% have rosacea. We therefore estimated that 77% of people with psoriasis and 82% of people with rosacea are untreated. Greater awareness, resources, and community outreach projects are potential tools that could eliminate this disparity and increase the quality of life for patients with these diseases.

Keywords: psoriasis; rosacea; treatment; untreated; prevalence; population

Introduction

Psoriasis is an immune-mediated cutaneous disease affecting 7.4 million adults, or an estimated 3.2% of the American population [1]. Although the pathogenesis of rosacea remains largely unknown, it is a condition estimated to affect 16 million Americans, or 5% of the United States population [2]. Many of those who have these common skin conditions may not be treated.

Recognizing those who are not being treated for these conditions is important because of the diminished quality of life and higher health risks these patients face. Psoriasis is associated with social stigmatization, psychological burden, and professional disability [3]. Psoriasis is also an independent risk factor for the development of myocardial infarctions and ischemic heart disease [4]. Rosacea is an often overlooked medical condition that, if left untreated, can progress to facial deformity, ocular damage, and psychological distress [5]. These patients have a higher incidence of depression and social phobia; they suffer from a lower quality of life compared to unaffected individuals [6].

Despite the impact of psoriasis and rosacea, many of those who have these common skin conditions may not be treated. Therefore, treatment of psoriasis and rosacea is crucial to prevent long term health and psychosocial repercussions. The purpose of this study is to examine what percentage of people with psoriasis or rosacea are receiving formal medical treatment for their condition.

Methods

Data were obtained from the Humana database, a large dataset for claims and reimbursed costs, which includes 18,632,362 patient records. We searched by ICD-9 code for psoriasis (696.1) and rosacea (695.3) to identify patients of any age who were seen and carried the diagnosis for either condition between 2007 and 2014. The number of patients with each diagnosis code was divided by the total number of patients in the Humana database to determine the prevalence of people seeking formal medical care for psoriasis or rosacea. These values were calculated again for patients less than 65 years of age because the primary insurer for most patients 65 years of age or older is Medicare. Therefore, data from the Humana database for that age group are not as representative as they are for the rest of the general population. These prevalences were then compared to the estimated prevalence of psoriasis or rosacea in the U.S. population.

To estimate the percentage of Americans treated for psoriasis, our regional data was compared to the United States population. The percentage of people from the database seeking treatment for psoriasis was divided by the percentage of Americans with psoriasis to estimate the percentage of Americans who are under care for their psoriasis. This same algorithm was followed using the calculated percentage of patients from the database seeking treatment for rosacea and the prevalence of Americans with rosacea expressed as a percent.

Results

We identified 140,439 patients (0.75%) with the diagnosis of psoriasis and 165,130 (0.89%) patients with the diagnosis of rosacea from the database. (Table I). For those under 65, 64,077 (0.79%) of patients had a visit code for psoriasis and 78,218 (0.96%) had a visit code for rosacea (Table I). These values were compared with the estimated total number of Americans with psoriasis or rosacea. Approximately 3.2% of Americans have psoriasis and approximately 5.0% of Americans have rosacea. An estimated 23% of Americans with psoriasis are treated and approximately 18% of Americans with rosacea are treated. Therefore, approximately 77% of all Americans with psoriasis and 82% of Americans with rosacea are not being treated for their disease.

Table 1. Percentage of patients in the database who were treated for psoriasis or rosacea

	Under 65 years old		All Age Groups	
	Psoriasis	Rosacea	Psoriasis	Rosacea
# of Patients with Disease	64,077	78,218	140,439	165,130
# of Patients in Database	8,114,926	8,114,926	18,632,362	18,632,362
% of Patients in Database being Treated	0.79%	0.96%	0.75%	0.89%
% of Americans with Disease (all age groups)	3.20%	5.02%	3.20%	5.02%
Estimated % of Americans with disease who are treated	24.7%	19.1%	23.4%	17.7%

Discussion

The repercussions of leaving psoriasis or rosacea untreated are psychosocial distress and long-term health consequences. Why are patients not being evaluated and treated for their disease?

Care may not be pursued owing to the perceived mild nature of rosacea symptoms or the relapsing and remitting natural course of the disease [7]. Only 10% of rosacea patients were aware of the condition before being diagnosed by their medical professional [8]. This suggests a lack of awareness about the signs and symptoms of rosacea that would promote seeking care from a medical professional. In addition, rather than seeing a dermatologist, patients may be self-medicating with topical, over-the-counter anti-redness treatments, which have grown in popularity since 2002 [9]. Cost could also be a factor in preventing patients from seeking treatment for rosacea. A national survey of rosacea patients illustrated that 24% of 427 patients treated planned to switch medications because of costs and another 17% of 769 patients planned to discontinue their treatment plan related to insurance coverage issues [10].

The prevalence of undiagnosed psoriasis was estimated to be anywhere from 0.4% to 2.28% of the total population [11]. Undiagnosed patients have a tendency to be males, non-white, less educated, and without a significant other [11]. Theoretically, those not seeking treatment for psoriasis either have yet to be diagnosed or choose not to seek treatment because of financial constraints. Adherence is also a major issue. Most of those diagnosed with psoriasis have mild disease for which topical medications are prescribed. Topical medications are less likely to be filled than systemic medications and application often declines over time [12]. In addition, many patients do not receive enough education about safety, proper use, and efficacy of topical steroids in treating psoriasis, which may contribute to low compliance with long-term disease management [12]. Among psoriasis patients, 10-25% suffer from moderate-to-severe psoriasis for which treatment with more expensive biologic mediations may be indicated [13]. From 2000-2008, biologics increased the overall cost of treating psoriasis by 30% and these medications are steadily becoming more expensive [14, 15]. Increasing cost of medications, low compliance with previously prescribed treatments, and lack of patient education materials are all potential factors contributing to the lack of treatment for common skin conditions such as psoriasis and rosacea.

The question becomes: what can we do to help get treatment for those who need it? The National Psoriasis Foundation is an excellent resource which provides education, support, advocacy, and contact information to ask questions. Similarly, The National Rosacea Society raises awareness, conducts research, and provides educational resources to patients. The American Academy of Dermatology website provides many patient educational resources at the lowest grade level when compared to other resources such as National Psoriasis Foundation and the Arthritis Foundation [16]. Ideally, patient education materials should be provided at a 6^{th} grade reading level [16,17]. A tool that could potentially aid in diagnosing and treating patients with psoriasis or rosacea is use of community outreach projects. An example is the SCREEN project launched in Northern Germany from 2003-2004 [18]. In this study, a population-wide, whole- body skin cancer screening was conducted and showed a substantial impact on melanoma incidence, which was not appreciated in a similar population in which screenings were not conducted [18]. Community outreach projects offering dermatology screenings could increase the incidence of those with psoriasis and rosacea and allow more patients to seek treatment.

This study has important limitations typical of a claims database study. We used ICD-9 claims in the patient's history to diagnose psoriasis and rosacea. Therefore, our study and data are subject to coding errors. In addition, the sensitivity and specificity of the codes for psoriasis and rosacea are not established. We could not assess severity of disease, only the presence of disease. Further confirmation of diagnosis could have been made through searching for a second ICD-9 code in the patient's history. In addition, we assume that those who have a diagnosis code of psoriasis or rosacea are actually being treated, which may not be the case based on the severity of disease or patient choice. This study only included those with diagnosis codes from 2007-2014. Those diagnosed before this time with controlled disease or those with poor adherence and lack of follow-up may not have been included in this study.

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Conflict of Interest

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