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Commentary

Rosacea in skin of color: not a rare diagnosis

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Abstract

Background: The prevalence of rosacea in skin of color is not well characterized and may be underestimated. Physicians may not recognize and diagnose rosacea correctly in skin of color.

Purpose: To assess the prevalence of rosacea in skin of color and determine if patients of color with rosacea symptoms are receiving a diagnosis of rosacea

Methods: We analyzed the National Ambulatory Medical Care Survey (NAMCS) for 1993-2010 for racial and ethnic distribution of patients with rosacea. Common reasons for visit in rosacea patients were tabulated and frequency of rosacea diagnosis was compared in patients of each race with the relevant reasons for visit.

Results: Of all patients diagnosed with rosacea, 2.0% were black, 2.3% were Asian or Pacific Islander, and 3.9% were Hispanic or Latino of any race. Leading reasons for visit associated with rosacea included “other diseases of the skin”, skin rash, and discoloration or abnormal pigmentation. Rosacea was the primary diagnosis for 8.3% of whites and 2.2% of blacks complaining of “other diseases of the skin”, for 2.0% of whites and 0.6% of blacks complaining of skin rash, and for 3.0% of whites and 0.0% of blacks complaining of discoloration or abnormal pigmentation. The percentage of rosacea patients who were black or Asian/Pacific Islander did not change significantly over time.

Limitations: No specific reason-for-visit code indicating rosacea exists in the NAMCS. Prevalence may be underestimated if some patients do not visit a physician for treatment.

Conclusions: Patients of color rarely receive a diagnosis of rosacea, even when they have symptoms suggesting it. Rosacea has not become more commonly diagnosed in skin of color in recent years.

Introduction

Rosacea is common in white patients, but is less commonly diagnosed among blacks [1,2]. Of 11,729 black patients H. H. Hazen encountered over 25 years, only nine were diagnosed with rosacea [2]. Although the prevalence rates of rosacea range from 1% to 22% [3], the frequency of rosacea in skin of color has not been well characterized and may be underestimated. Although rosacea is

less common in skin of color, it is not rare [4]. Erythema and telangiectasia are more difficult to appreciate in darker skin and less cosmetic deformity may occur in early cases, possibly contributing to fewer physician visits [2]. Our objectives were to assess the prevalence of rosacea in skin of color and to analyze the leading reasons for physician visits for rosacea patients to distinguish if those reasons were equally likely to be associated with a diagnosis of rosacea across all races.

Methods

We analyzed representative data on visits to U.S. physicians obtained from the National Ambulatory Medical Care Survey (NAMCS) for 1993-2010 for racial and ethnic distribution of patients with rosacea. Common reasons for visit in rosacea patients were tabulated and frequency of rosacea diagnosis was compared in patients of each race with the relevant reasons for visit. We also used U.S. Census data to determine the number of visits per 100,000 population. Limitations to our data analysis were that no specific reason-for-visit code indicating rosacea exists in the NAMCS and the prevalence of rosacea may be underestimated if some patients do not visit a physician for treatment.

Results

Of 31.5 million rosacea visits, 630,000 (2.0%; CI 1.1 – 2.9%) were by blacks, 730,000 (2.3%; CI 1.1 – 3.6%) by Asians or Pacific Islanders, and 1,250,000 (3.9%; CI 2.5 – 5.4%) by Hispanics or Latinos. There were 700 visits (CI: 660 – 730) for rosacea per 100,000 whites in 2000 as compared to 100/100,000 (CI: 50 – 140) for blacks, 350/100,000 (CI: 160 – 530) for Asians or Pacific Islanders, and 200/100,000 (CI: 120 – 270) for Hispanics or Latinos. The top three leading reasons for visit associated with rosacea included “other diseases of the skin”, skin rash, and discoloration or abnormal pigmentation (Table). Rosacea was the primary diagnosis for 8.3% of whites and 2.2% of blacks complaining of “other diseases of the skin”, for 2.0% of whites and 0.6% of blacks complaining of skin rash, and for 3.0% of whites and 0.0% of blacks complaining of discoloration or abnormal pigmentation. Using linear regression, the percentage of rosacea patients who were black, Hispanic, or Asian/Pacific Islander also did not change significantly over time ($P>0.05$, (Figure)).

Reason of Visit					
Other diseases of the skin		Skin rash		Discoloration or abnormal pigmentation	
	25.3%		19.6%		14.7%
White		White		White	
Actinic keratosis	9.6%	Contact dermatitis/eczema, unspecified cause	20.7%	Actinic keratosis	14.2%
Contact dermatitis/eczema due to plants	8.5%	Rash and other nonspecific skin eruption	6.5%	Contact dermatitis/eczema, unspecified cause	4.3%
Rosacea	8.3%	Herpes zoster	2.9%	Other seborrheic keratosis	4.0%
Urticaria, unspecified	7.1%	Contact dermatitis/eczema due to plants	2.5%	Malignant neoplasm of skin	3.7%
Contact dermatitis/eczema, unspecified cause	6.1%	Urticaria, unspecified	2.1%	Benign neoplasm of skin	3.2%
		Rosacea	2.0%	Rosacea	3.0%
Black		Black		Black	
Keloid scar	14.1%	Contact dermatitis/eczema, unspecified cause	21.8%	Other acne	9.9%
Urticaria, unspecified	12.4%	Rash and other nonspecific skin eruption	5.6%	Contact dermatitis/eczema, unspecified cause	8.4%
Contact dermatitis/eczema, unspecified cause	7.0%	Acute upper respiratory infections	3.3%	Pityriasis versicolor	7.4%
Contact dermatitis/eczema due to plants	4.4%	Routine infant or child health check	3.2%	Dyschromia, unspecified	6.3%
Other specified diseases of hair and hair follicles	4.0%	Other atopic dermatitis and related conditions	3.2%	Seborrheic dermatitis	3.7%
Rosacea	2.2%	Rosacea	0.6%		

Asian or Pacific Islander		Asian or Pacific Islander		Asian or Pacific Islander	
Urticaria, unspecified	26.31%	Contact dermatitis/eczema, unspecified cause	26.4%	Dyschromia, unspecified	7.7%
Keloid scar	10.94%	Rash and other nonspecific skin eruption	6.8%	Other seborrheic keratosis	7.0%
Contact dermatitis/eczema, unspecified cause	8.64%	Other atopic dermatitis and related conditions	5.6%	Other dyschromia	6.8%
Hypertrophy (benign) of prostate	7.16%	Urticaria, unspecified	5.6%	Urticaria, unspecified	6.3%
Rosacea	4.10%	Routine infant or child health check	3.9%	Other and unspecified pityriasis	6.1%
		Rosacea	0.4%	Rosacea	2.4%
Race unknown		Race unknown		Race unknown	
Actinic keratosis	8.1%	Contact dermatitis/eczema, unspecified cause	18.6%	Actinic keratosis	12.2%
Rosacea	8.0%	Rash and other nonspecific skin eruption	13.8%	Other seborrheic keratosis	5.0%
Contact dermatitis/eczema, unspecified cause	6.7%	Other atopic dermatitis and related conditions	4.5%	Other cellulitis and abscess	3.6%
Contact dermatitis/eczema due to plants	6.2%	Acute upper respiratory infections	2.7%	Contact dermatitis/eczema, unspecified cause	3.3%
		Contact dermatitis/eczema due to plants	2.4%	Unspecified disorder of skin and subcutaneous tissue	3.0%
Systemic lupus erythematosus	4.4%	Rosacea	0.9%	Rosacea	0.7%

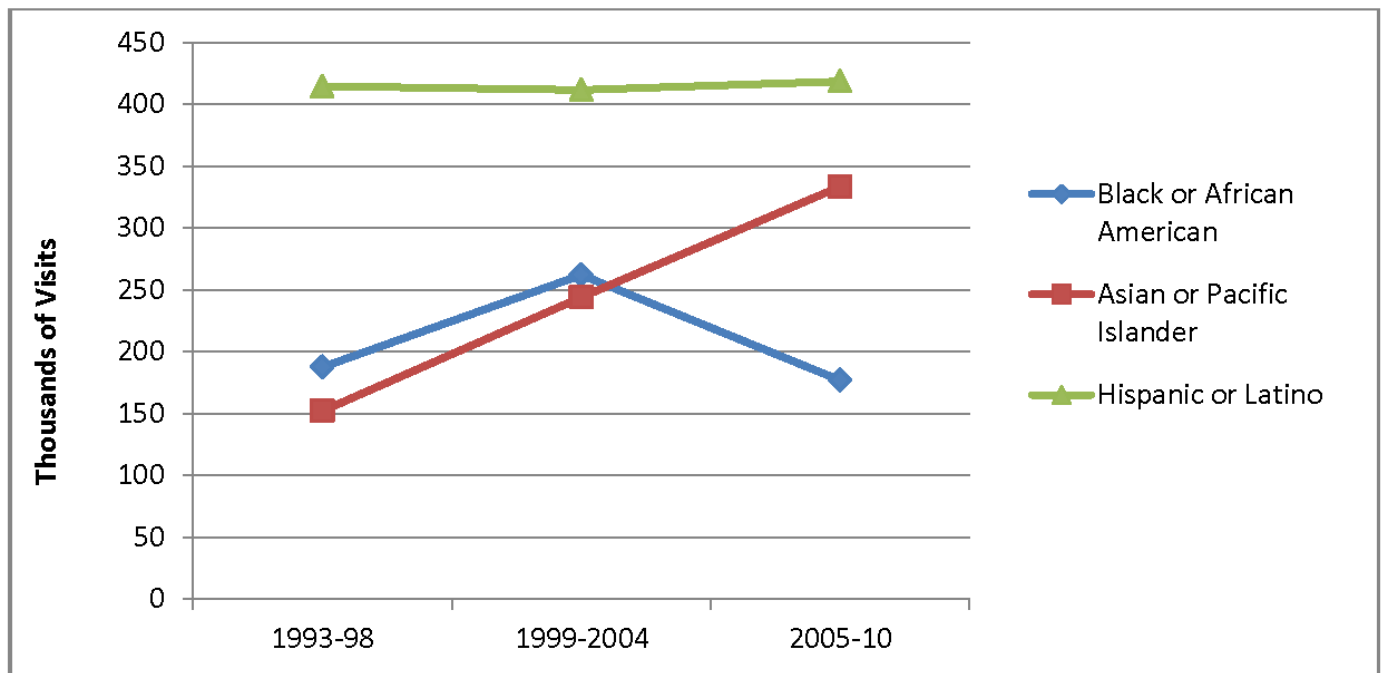


Figure. There was no significant change over time in the number of rosacea visits by race

Discussion

Rosacea has not become more commonly diagnosed in skin of color in recent years. We found that patients of color less frequently received a diagnosis of rosacea when they had the same reasons for visit that often led to a rosacea diagnosis in white patients. This finding suggests a possible under-diagnosis of rosacea in skin of color. Fewer rosacea visits do not necessarily suggest that rosacea is less common in skin of color. Patients of color may not be bothered by more subtle visual changes in their skin leading to fewer physician visits [2]. Alternatively, they may rarely receive a diagnosis of rosacea, even when they have symptoms suggesting it. Physicians should consider this disorder in their differential diagnosis when patients of color present with facial flushing, warmth, ocular symptoms, or eruptions lacking comedones..

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