AD is a chronic inflammatory skin disease that has a psychosocial and emotional impact on affected patients, their families, and the health care community. Its etiology is largely genetic, though the development of physical symptoms is triggered by environmental factors such as climate or diet. The onset of AD begins in early childhood—usually between three to six months of age—and can persist throughout adulthood. Most adults with eczema/AD have a history of childhood disease. There are many quality-of-life concerns, both physical and psychosocial, associated with AD that negatively impact patients and their support systems. Many patients with AD report that the physical symptoms, such as itching and scratching, can often lead to social embarrassment and result in social isolation. This isolation can be self-inflicted to avoid discussing their condition or inflicted by others who seek to avoid the disease for fear of contagion. As an adult, this can extend into the workplace. It has been reported that AD can hinder career progression. Psychologically, the constant itching and burdensome symptoms can even lead to bouts of depression and suicidal ideation.

**ATOPIC DERMATITIS AND SES**

AD’s potentially chronic course becomes a particular cause for concern given the increase in incidence seen in industrialized countries as well as its mounting financial costs. The high financial costs of AD management and treatment can place an undue burden on an individual’s or family’s economic status. Therefore, a review of AD’s management and a consideration of patients’ SES is crucial. SES is defined as an individual’s social and economic standing and serves as a measure of an individual’s or family’s social or economic position or rank in a social group. Traditional SES measures include occupation, education, and income. SES affects the ability to access care (through income, health insurance status, etc.) may reverse or limit the progression of disease.

**DERMATOLOGIC CONDITIONS AND THE “HYGIENE HYPOTHESIS”**

In comparison to most chronic conditions, the prevalence of AD has been shown to rise with increasing socioeconomic status. However, much of this data comes from global epidemiology studies in children. Children with parents of higher socioeconomic status has been associated with childhood allergic sensitization and atopic disease. This is likely due to the lack of allergen exposure in more sanitary environments that children of higher SES reside in during their immune development. This is known as the “hygiene
hypothesis.” It suggests that improved sanitation methods and efforts to keep germs at bay may, in fact, deprive young, still-developing immune systems from being trained to recognize and react to certain types of irritants and allergens. This hypothesis has been demonstrated in a study comparing children and their place of birth with allergic disease prevalence. This study found that children born outside of the United States were less likely to develop asthma or allergies when compared to those born in the US.

**ATOPIC DERMATITIS AND “WESTERNIZATION”**

In a study by Silverberg et al. increased time spent living in the US upped the risk of developing allergies. The relatively sterile environment of the US makes American children more prone to allergies, and there appears to be a protective effect from being exposed to toxins early in life among foreign-born children. This protection does not appear to be lifelong.

Silverberg posits that aside from environmental exposure, the way children are raised could contribute to their likelihood of developing allergies. For example, foreign-born parents may have fed their children a healthier diet, perhaps one that included culturally specific foods like green tea or the spice curcumin, which may have properties that protect against allergies and inflammation. Thus, those children were less likely to have a family history of atopy or allergic disease. Foreign-born American adults had significantly lower prevalence of eczema than the native population initially, but after 10 years, the foreign-born population seemed to have significantly higher rates of eczema and asthma.

Asthma, another inflammatory disease and a comorbidity of AD, was found higher in Westernized, economically developed countries than developing countries due to different levels of exposure to environmental risk factors. A sudden shift in macro- and micro-migration may have contributed to new developments of inflammatory diseases such as AD, asthma, rhinoconjunctivitis, and the like. A new environment may be higher in allergens and also new types of allergens that an individual may not have been exposed to in their native country.

The incidence of many inflammatory conditions, such as asthma and allergies, has increased dramatically in Western countries during the past few decades. In addition to improved hygiene, the nutritional change that has occurred in the Western world and the more recent “Westernization” of many countries coincide with the rise in the prevalence of asthma, allergies, and certain autoimmune diseases.

As the increase in the prevalence of allergies has occurred during a period of rapid technological progress, it is plausible that the modern Western lifestyle might be involved in this increase.

**ATOPIC DERMATITIS AND ITS PSYCHOLOGICAL BURDEN**

As mentioned, AD affects quality of life. A review published in the journal *Skin Pharmacology and Physiology* in 2018 showed that 30 percent of patients with a skin disorder have a psychological condition, such as anxiety and depression. Adults with AD are twice as likely to suffer moderate depression and five times more likely to be severely depressed compared to adults without the disease. Moreover, adolescents with AD were more likely to suffer suicidal ideation than healthy teens.

**MECHANISM TO ADDRESS HEALTH CARE DISPARITIES IN AD**

A public health intervention is warranted to address health care disparities in AD. Social media as a knowledge source is an integral part of daily life. Around 50 million Americans obtain health-related information on the internet monthly by streaming free videos on YouTube or visiting electronic databases such as Wikipedia to increase their awareness about these dermatological diseases.

Adequate education regarding simple lifestyle modifications and early recognition of symptoms can reduce recurrence of atopic diseases and visits to the emergency department. Dr. Amir, et al. evaluated the extent of involvement of dermatology journals, professional dermatology organizations, and dermatology-related patient advocate groups on social networking sites. Of 102 dermatology journals ranked by SCImago (scimagojr.com/), 12.7 percent had a presence on Facebook and 13.7 percent had one on Twitter. The study identified popular dermatology journals based on “Facebook likes” and “Twitter followers.” This study concluded that though some journals are active on social media, most have yet to recognize the potential benefits of fully embracing popular social networks to create avenues where users can disseminate and access information.

Virtual networking sites also facilitate online support communities and provide platforms that can engage patients. In addition, these sites are emerging as a place for scientific journals to reach broader audiences and to provide a potential tool for education and for conversation between patients and healthcare providers.

Though, with much of the internet, there is the danger of
disseminating misleading or false information. Many sites, including YouTube and Wikipedia, are user-maintained platforms. Regrettably, authoritative and credible health-care organizations produce few highly educational and suitable medical videos, and the few that are available are not viewed at the same frequency as those found on other social media or blog sites. The lack of correlation between public response and video quality should be a concern for any medical provider or organization. Also concerning are the paid testimonials littered throughout social media platforms that may misrepresent the dermatological benefits or experience of a product or source. This raises ethical questions for those who peddle potentially biased information to patients attempting to make important personal health care decisions. Thus, while patient education videos have the potential to reach and inform patients, additional regulations or warnings are needed so that information seekers can avoid or critically view low-quality or misleading content posted by non-health professionals.

CONCLUSION

Use of social networking sites allows professionals and professional organizations the opportunity to provide an up-to-date stream of information and create a platform to communicate, share knowledge, and discuss care with patients. Thus, we propose using YouTube as a public intervention for dermatologic conditions such as AD. These videos can educate on different conditions with preventative action, symptoms and possibly a link in the description and/or at the end of the videos that will direct patient to make an appointment with a local physician if necessary. High-quality patient education videos by reputable health organizations and qualified medicinal professionals should become the new norm. With continued technological evolution, the potential utility to have professional, up-to-date, educational dermatological videos regarding AD, other dermatological ailments, and even other medical diseases, is limitless. ■

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