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The Psychosocial, Economic, and Occupational Impacts of Psoriasis

A Review

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ABSTRACT: Psoriasis is a chronic, autoimmune, and inflammatory disorder that impacts the skin and joints, with the propensity to produce devastating psychosocial, economic, and occupational effects. These are often not solitary; for example, psychological manifestations may impact one's occupational and economic statuses. The purpose of this review is to raise awareness of these consequences of disease that clinicians may consider incorporating into a patient-centered model of care.

Key words: Psoriasis, Occupational Impacts, Psychosocial Impacts, Economic Impacts

Psoriasis is a chronic, inflammatory disease that primarily affects the skin and joints (Bolognia, Jorizzo, & Schaffer, 2012). In addition to its physical manifestations, psoriasis has the propensity to significantly impact quality of life (QOL; Kimball et al., 2011). The unfavorable cosmetic manifestations of visible plaque psoriasis have been associated with profound negative consequences on employment, education, and social relationships (Pichaimuthu, Ramaswamy, Bikash, & Joseph, 2011). Despite that disease incidence is only 3% in the United States (National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2013), the rate of concurrent depression is approximately twice the rate of depression in the overall population (National Psoriasis Foundation, 2016c). The financial impact of psoriasis is also significant: Over half of patients with psoriasis report experiencing career limitations (Ayala et al., 2014), and the total direct healthcare costs were \$51.7–\$63.2 billion in 2013 (Brezinski, Dhillon, & Armstrong, 2015). Therefore, the purpose of this review is to highlight the significance of disease burden on the psychosocial, economic, and occupational aspects of patients' lives to raise provider awareness for clinical practice.

PSYCHOSOCIAL IMPACTS

The initial onset of psoriatic manifestations typically arises during young adulthood, during a stage of social development where identity is changing and self-worth is highly susceptible to the influence of peer pressure (Bundy et al., 2014). Although psoriasis is not contagious, patients may exhibit social isolation and avoidance coping because of their outward appearance and symptoms (Narayanan, Guyatt, Franceschetti, & Hautamaki, 2014). It is common for patients to experience social withdrawal and feelings of stigma, while possessing higher rates of shame, anxiety, depression, and lower self-esteem (Narayanan et al., 2014). In contrast with the general population, individuals with psoriasis experience greater incidence of psychiatric disease, impacting overall QOL and sexual functioning (Leman et al., 2015).

There is no linear correlation between the degree of psychosocial impact and the severity of disease (Bundy et al., 2014); therefore, patients with mild disease may experience substantial psychological ramifications. A resounding 75% of patients report that psoriasis has a "moderate" to "large" negative impact on their QOL (Kimball et al., 2011). In some instances, the burden of disease is so profound that it dissuades the pursuit of one's life passions and goals, including occupational ambitions (Narayanan et al., 2014). One study showed that women with psoriasis were increasingly likely to experience disease-related stress, anxiety, and depression and experienced a higher rate of work and school absences (Mahler, Jackson, & Ijacu, 2009). Another

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study revealed that patients were willing to pay almost $11,500 to mitigate the "intangible costs" of their disease, that is, to eliminate the negative physical and emotional disease manifestations despite the already considerable costs of management (Brezinski et al., 2015).

ECONOMIC IMPACTS

The overall economic burden of psoriasis is tremendous. In 2013 adjusted data, the total annual costs were estimated at $112–$135 billion nationally, with annual direct and indirect treatment costs estimated at $51.7–$63.2 and $23.9–$35.4 billion, respectively (Brezinski et al., 2015). Because of inflation and the cost of biologic therapy, annual medication-related spending on psoriasis is steadily increasing (Cheng & Feldman, 2014). Thus, affordability, precipitated by variables such as insurance coverage and household income, has been shown to significantly influence an individual's choice of treatment (Mahler et al., 2009).

There are a multitude of direct costs to patients with psoriasis, such as office visits, medication, cleaning-related expenses, topical emollients, and traveling costs (Mustonen, Mattila, Leino, Koulu, & Tuominen, 2014). Meyer et al. (2010) reported that patients sustain significant out-of-pocket costs, particularly for balneotherapy, whereas Berger, Ehlken, Kugland, and Augustin (2005) found ultraviolet therapy to be the highest individual cost. The personal economic burden is reported to be higher in psoriasis than in other costly medical conditions, such as diabetes, given the potentially onerous physical and mental consequences (Vanderpuye-Orgle et al., 2015). The estimated annual cost of treatment with targeted immunosuppressant therapy in moderate-to-severe disease ranges from almost $47,000 to $62,000 per patient (Brezinski et al., 2015). There are conflicting reports on the cost-effectiveness of phototherapy, as one study found this treatment to be equal in cost to biologic therapy (Mustonen et al., 2014), whereas another study found biologic therapy to be more costly to insurers. Given the individual costs associated with treatment time and co-pays, treatment with biologic therapy remains the most favorable option (Simpson et al., 2006).

OCCUPATIONAL IMPACTS

Although psoriasis may present at any time across the lifespan, the average age of onset is between 15 and 30 years (National Psoriasis Foundation, 2016a). Just as this disease generally manifests during a developmental phase influential to identity and self-worth, young adulthood is a dynamic time when individuals are either training in or newly employed in their chosen occupation (Newman & Newman, 2014). Ayala et al. (2014) studied the consequences of psoriasis on the workplace and found that all age groups were equally impacted; however, higher-risk populations were those possessing lower educational attainment and female gender. Another study found that almost half of respondents with severe psoriasis reported not working full time because of their disease to some degree (Horn et al., 2007).

There is substantial overlap in the literature between the individual psychosocial, occupational, and economic impacts of disease. Meyer et al. (2010) found a positive correlation between clinical disease severity, QOL, and work productivity. Patients report feelings of discomfort, anger, frustration, and shame, while experiencing social and occupational stigma (Ayala et al., 2014). Affected employees miss an average of 19.4 days per year because of treatment and are often not as productive as those without the disease (Levy et al., 2012). Patients with joint involvement and those over 39 years old have been found to experience the greatest risk for productivity losses (Meyer et al., 2010). Health-related work absences secondary to psoriasis management yield losses of approximately $8.6 billion annually as reported in 2005, equating to nearly $2,600 per worker (Fowler et al., 2008). Narayanan et al. (2014) found that the physical symptoms of psoriasis resulted in psychological manifestations, leading to social avoidance, which in turn perpetuated further psychological distress, including activity impairment such as career change.

TRANSLATION INTO PRACTICE

In 2001, the Institute of Medicine established aims for healthcare improvement, including adopting patient-centered care (Institute of Medicine, 2001). The implementation of this goal involves customizing care to incorporate patient-specific needs and values while engaging patient decision making to help guide clinical care (Institute of Medicine, 2001). One study involving patients with psoriasis showed that adopting a patient-centered, online care model for treatment led to increased cost savings and was equally effective when compared with standard in-office care (Brezinski et al., 2015). Additional cost-saving ideas may include education on medication use and trigger control (National Psoriasis Foundation, 2016b), the utilization of prescription drug programs, or the use of generic medications such as biosimilar agents, which may represent a form of more cost-effective biologic therapies (Brezinski et al., 2015; Cheng & Feldman, 2014).

As mentioned, even mild disease may produce discordant psychological repercussions, yet patients resoundingly report that their psychological distress is not routinely recognized by healthcare professionals (Bundy et al., 2014). Only half of the patients experiencing anxiety and a third of those experiencing depression were successfully identified during consultation with dermatology clinicians (Richards, Fortune, Weidmann, Sweeney, & Griffiths, 2004). Adopting a patient-centered approach may incorporate screening all patients with psoriasis about any symptoms of anxiety or depression during office visits and then offering suggestions for local mental health clinicians or support groups as needed.

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DISCUSSION

Psoriasis has considerable occupational impacts and, in the case of palmoplantar psoriasis, has been shown to be exacerbated by occupational exposure through Koebnerization (Khandpur, Singhal, & Sharma, 2011). Despite several articles examining the overall occupational impacts of the disease, there were no studies found examining disease impact stratified by occupational type. For example, although there were an estimated 14.4 million restaurant industry employees in the United States in 2016 making an average of $18,400 per year (U.S. Department of Labor, 2014), there was a paucity of literature examining the experience of individuals with psoriasis who work in food service. Given the importance of outward appearance and hygiene in food service work, these affected individuals may experience stigma from coworkers, customers, and the management. The experiences of food service workers with psoriasis could prove an interesting area for future research inquiry.

CONCLUSION

Despite that the physical manifestations of psoriasis primarily involve the skin and joints, it is resoundingly clear that psoriasis has the potential to produce devastating effects on the psychosocial, economic, and occupational statuses of those impacted. Recognizing that these potential consequences may also exacerbate each other is additionally important to consider. Maintaining a patient-centered, individualized approach to management may be one method to improve patient engagement in treatment and outcomes. ■

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