**Psoriasis Case Study and Related Literature**

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**Abstract**

Psoriasis is derived from psora's Greek word, which literally translates as scaly. The word alludes to the red and bumpy skin plaques caused by the condition. Psoriasis is an autoimmune disease that affects the skin of the body. It is quite prevalent. When the immune system incorrectly perceives cells in the skin as a danger and launches an assault against them, skin damage as a consequence of the injury results in the creation of red and scaly areas. In addition to being unattractive, psoriasis may also be painful and uncomfortable to the patient. The ailment may be moderate, manifesting as little red spots on the skin, or severe, manifesting as huge sections of skin affected. Using a case study as an example, this article will examine the causes of psoriasis and risk factors, symptoms, diagnosis, and treatment options.

**Psoriasis Case Study And Related Literature**

Psoriasis is an autoimmune illness that affects the body's skin. It is extremely common. It occurs when the immune system incorrectly sees skin cells as a threat and initiates an attack on them (Brockow, 2003).The resulting damage causes the formation of red and scaly patches of skin. In addition to being unsightly, psoriasis can also cause pain and discomfort. The condition can be mild and appear as small red patches or severe cases that result in large areas of skin affected. Psoriasis can be divided into different types based on the severity of the condition and the types of cells affected. The skin can be covered with scaly red spots that resemble plaque psoriasis in severe cases. Other types of psoriasis include guttate psoriasis, inverse psoriasis, and erythrodermic psoriasis.

In most cases, patients with psoriasis experience itching and irritation. They also have frequent skin infections. This can lead to depression, anxiety, and mood swings. Patients should also have their nails and scalp examined to ensure no signs of psoriasis in these areas. Patients who have psoriasis should avoid exposing their skin to the sun. The sun's ultraviolet (UV) rays can lead to serious damage to the skin. Patients can cover their skin with sunscreen to ensure they do not get too much exposure (Turkington & Dover, 2009). Furthermore, patients can also protect their skin from wind and cold temperatures. One needs to be extra careful about infection because psoriasis patients are more prone to infections. Patients should also seek medical attention regularly.

**How Psoriasis Develops**

Psoriasis is a chronic autoimmune condition in which the immune system mistakenly targets healthy skin cells. This abnormal immune response triggers the rapid growth of skin cells and the formation of dense blood vessels beneath the skin’s surface, resulting in the characteristic red, scaly patches (Thomas, 2014). The inflammation is fueled by immune cells releasing chemical signals, which sustain the cycle of skin cell overproduction and irritation. Although psoriasis commonly affects areas such as the scalp, elbows, and fingers, it can occur anywhere on the body. While there is no cure, various treatments can effectively manage symptoms and reduce flare-ups. In some cases, psoriasis may coexist with or be triggered by other autoimmune disorders, including dermatomyositis, type 1 diabetes, and thyroid disease.

**Observations on Psoriasis**

It is a chronic condition that may affect people of any age and at any stage of life. It harms both adults and children. Psoriasis may manifest itself in various ways, including plaque psoriasis, guttate psoriasis, inverse psoriasis, and erythrodermic psoriasis, among others (Romiti, 2017). There are five different types of psoriasis, each with its own unique set of symptoms. The most common type is plaque psoriasis, which manifests as red patches or raised bumps on the skin covered in a white buildup. Guttate psoriasis happens when the plaques rapidly cover large areas of your body and can manifest in any age group; inverse psoriasis will cause lesions to form beneath the surface layer if left untreated for long periods; erythrodermic generalized psoriasis takes over all layers of skin and causes life-threatening complications such as heart failure due to extreme dryness that damages blood vessels inside your organs this rare form presents itself mostly among elderly patients who have compromised immune systems. Plaque psoriasis and guttate psoriasis are the most frequent kinds of psoriasis. The individual's age, the person's genetic composition, and the person's general health are the most important variables in determining the severity of the ailment.

**Diagnosis**

The first step in diagnosing psoriasis is identifying what type of psoriasis the person has. This is often done through a skin-prick test or a biopsy (Khanna, 2011). After this, a doctor will perform a physical examination. This may include looking at the patient's skin, checking for the presence of lesions, and examining the joints.

When it comes to diagnosing psoriasis, many laboratories can identify the type of

psoriasis using genetic tests.

**Symptoms**

Psoriasis is a chronic skin disorder for which there is currently no cure. Weeks or months may pass before a flare-up subsides or enters remission. Some therapies may help you manage your symptoms (Bells, 2019). To manage psoriasis effectively, you may need to alter your lifestyle and coping mechanisms. Psoriasis symptoms vary from person to person. Most of the time, the following signs and symptoms are present: red skin with silvery scales and scars of varying sizes, most often seen in children.

Dry, cracked skin that bleeds or itches. Some of the symptoms include itching, burning, and discomfort. Nails that have become thicker, pitted or ridged. Joints that are inflamed and uncomfortable. A small quantity of dandruff-like scaling on the skin and enormous eruptions that cover a large skin area are possible symptoms (Anderson, 2014). The most often affected areas are the upper and lower back, elbows, knees, thighs, soles of the feet, and palms, followed by the scalp, face, and hands. Most psoriasis creates flare-ups that last a few weeks or months before fading or resolving.

**Case Study of A 25-Year-Old Female With Plaque Psoriasis**

There are many causes of psoriasis. These include genetics, infections, and medications. First, psoriasis may be caused by a gene. A person's genes determine their risk of developing the disease. If a person has a family member (sibling, parent, or child) who has psoriasis, they may also develop it (Bentrim, 2018). Various genetic disorders are linked to the development of psoriasis, such as Pityriasis Rubra Pilaris and Hermansky-Pudlak Syndrome. These are all caused by a mutation in a single gene. Another cause of psoriasis is due to infections. The most common infection linked to psoriasis is a bacterial infection. The bacteria Staphylococcus causes this. In addition to this, certain types of fungi, viruses, and parasites may also be responsible for causing psoriasis.

She presented herself with several thick, scaly, well-delineated erythematous plaques that were silver in color and several thick, scaly, well-defined plaques that were silver in color on her arms and legs. It is estimated that they cover around 15 percent of her entire body surface area by wrapping her elbows, thighs, and a portion of her scalp. She previously said that she experienced rashes but that they were not life-threatening. When she first started using apremilast, she had GI [gastrointestinal] problems such as nausea and diarrhea.

**Risk factors**

Risk factors for psoriasis include being female, having a family history of the condition, being of European descent, having a history of guttate psoriasis, and getting guttate psoriasis as a child. People with these risk factors are more likely to develop psoriasis (Ellinghaus, 2012). Certain factors increase the risk of developing the condition at a younger age. These factors include stress, infections, hormonal changes, diet, and sun exposure. This lady is of reproductive age. Her scalp was also afflicted, as was a considerable portion of her body's surface area. A single plaque of psoriasis on their scalp may have a bigger effect on them than three, four, or five lesions on their body (Weinberg & Lebwohl, 2014). I believe that involvement of the scalp may increase their risk of getting arthritis and that we should be aware of this.

Additionally, she has been placed on a parchment before, is not responding, and has some tolerability issues. I would assert that the patient is a candidate for biologic therapy in this instance.

**Treatments**

Even the most expensive agents have a 50% success rate, and the new one that is about to be presented may have a higher percentage. Nonetheless, I believe that lofty ambitions are unrealistic and that we may get too enthusiastic about pursuing them. Various treatments can help ease the symptoms of the condition. It is important to understand the different types of psoriasis and the risk factors. A dermatologist can then recommend the correct treatment for each type. There are many treatment options for psoriasis. Doctors can decide which treatment is best for each person based on the risk factors and symptoms (Weinberg, 2008). Many treatments are available for psoriasis. Some are used to treat the symptoms, and others prevent future occurrences. These include the following:

**● Topical corticosteroids** - These are synthetic cortisone medications applied to the skin. They reduce the severity of psoriasis and help prevent the development of active lesions. These medications can also be used to treat other inflammatory skin conditions like eczema and atopic dermatitis.

● **Oral corticosteroids** - These are taken by mouth. They reduce the severity of psoriasis and help prevent the development of active lesions. However, they do not work as well as topical corticosteroids in reducing itching.

**● Immunomodulators** - These are medications that boost the immune system. They are given to people with psoriasis to prevent the development of active lesions.

● **Retinoids** - These are used to treat moderate to severe cases of psoriasis.

**● Immunosuppressants** - These medications prevent the body's immune system from attacking the skin.

**Literature Review of Plaque Psoriasis**

Psoriasis is a chronic skin disorder that causes scaling and redness and cutaneous inflammation, and hyperproliferation of the epidermis. It is the most prevalent chronic skin disease worldwide, impacting more than a billion individuals. According to research on the worldwide epidemiology of psoriasis, the skin condition affects between 2% and 4% of the population in Western nations. Depending on the age group, it varies from 0% to 2% in infants and from 0.91 to 8.5 percent in adults.

Placental psoriasis is the most frequent illness, accounting for more than 90% of cases. Psoriasis plaque manifests as elevated, red spots that are difficult to remove due to a silvery-white covering of dead skin cells or scales. It is a long-term sickness that requires continuous therapy (Zanni, 2012). The National Psoriasis Foundation reports that these patches or plaques may appear on the scalp, knees, elbows, and lower back, among other areas. Psoriasis is today considered incurable, with no accepted cure or therapy. Biologics, systemic medications, topical formulations, phototherapy, and oral medicines are just a few of the treatments that may assist patients in reducing or eliminating their symptoms. Psoriasis experimental remedies include small chemicals and biotechnology-based solutions. Psoriasis may result in substantial psychological distress and psychosocial damage for individuals who suffer from it and acute feelings of stigma for those who do not.

Psoriasis has been demonstrated to be detrimental to patients' self-esteem and mental well-being and their social activities and romantic relationships. According to a poll conducted in the United Kingdom, almost three-quarters of persons with psoriasis reported it hampered their social activities; half claimed it prompted them to cancel social commitments; and one-third claimed it was difficult to establish new connections as a result of their condition (Leino, 2017). According to one study, 46% of individuals with psoriasis scored higher on depression scales than those without mental illnesses, showing that depression is prevalent comorbidity. Another research found that 5.5% of persons with psoriasis had active suicide thoughts throughout their condition ("Disease-specific health related quality of life instruments," 2010). Physical symptoms such as itching, joint inflammation, and pain may make it difficult for psoriasis patients to do everyday tasks like climbing stairs, performing housework, or showering.

Despite the disease's well-documented physical, social, and psychological burdens, the influence on patients' overall health-related quality of life is drastically underestimated (HRQoL). Even though skin illnesses are readily apparent, patients and physicians may have divergent viewpoints on the impact of skin disorders on HRQoL (Koblenzer, 2005). The health-related quality of life (HRQoL) of psoriasis patients has been evaluated using a variety of dermatological and psoriasis-specific evaluations. While employing disease-specific measures to assess HRQoL seems to have several benefits, these instruments exclude comparisons to non dermatological illnesses, which is a major drawback.

**Methods**

In all, two systematic reviews of the literature were conducted. The major objective of the literature search was to ascertain utility values for patients with psoriasis using the EQ-5D scale since this was the study's primary focus. To broaden the scope of the investigation, the second search was conducted for previously published systematic literature reviews that included utility values for chronic conditions other than psoriasis. Each review of the literature was written and presented using PRISM principles. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed in creating and presenting each of the literature reviews. To prevent selection bias in identifying specific chronic illnesses, a comprehensive literature search was done, and the list of chronic diseases assessed was compiled from the results of this extensive search.

**Eligibility Criteria**

Researchers were asked to submit papers for inclusion in the first literature review (on psoriasis) using baseline EQ-5D-derived utility index values. We excluded studies that displayed EQ-5D scores graphically or as a percentage change over time. Studies that did not independently offer EQ-5D scores for psoriasis patients were excluded. Since they did not meet the inclusion criteria, research including individuals known to have psoriasis-related comorbidities was excluded from the analysis. The second study examined EQ-5D utility index values generated from questionnaires using systematic literature reviews, which looked at additional illness categories. Studies that did not include utility values estimated using the EQ-5D were omitted from consideration. Evaluations that did not expressly report on major publications were eliminated from eligibility for this award for some reasons. Additionally, publications on the trustworthiness of patient-reported outcomes were eliminated, as were disputes about human resources' general health and well-being in a range of disease areas.

**Results**

The validity of the specified EQ-5D lower limit was established for all other chronic illnesses within the range of 0.20 to 0.66. According to assessments of published data, Type 2 diabetes mellitus (0.20) and cardiovascular diseases had the lowest utility index ratings (0.24). 27,28 Although ocular issues (0.64) and liver disorders (0.64) had some of the lowest utility estimates across all conditions; the research results suggested the highest EQ-5D-derived utility values (0.66). The lowest EQ-5D utility score reported for people with psoriasis was 0.52, significantly lower than the national norm (similar to end-stage renal disease, at 0.44).

The EQ-5D top limit for individuals with liver illness was 0.79, but the highest limit for patients with other conditions was 0.93. (cancer patients). The EQ-5D upper limits for all diseases (excluding liver disorders) were within 0.04 percent of the upper estimate for psoriasis severity (0.9). As a result, although the upper limit for psoriasis (0.79) seems to be much lower than the upper limit for liver illnesses, the lower limits for liver disorders appear to be increasing in the opposite direction of the upper limit. Psoriasis patients scored 0.14 points lower than those with liver disease (0.66).

**Limitations**

To appreciate the limits of this systematic investigation, it is critical first to recognize them. There was no attempt made to evaluate the work's quality. Numerous studies lacked confidence intervals and standard errors, making meta-analysis of the data unfeasible. Additionally, there was no standard reporting of sickness severity or other baseline variables, making it difficult to detect and reduce bias or heterogeneity in the data. As a consequence, qualitative comparisons have inherent constraints that must be considered.

Furthermore, the psoriasis studies reviewed only provided aggregate index utility values and VAS ratings for mobility, self-care, normal activities, pain/discomfort, and anxiety/depression, rather than individual EQ-5D scores for mobility, self-care, and normal self-care activities, pain/discomfort, and anxiety/depression. This is a significant flaw in the study's conclusions. Consequently, it's difficult to tell the difference between various types of disutility in people with psoriasis. Previous research has employed the SF-36 questionnaire to identify factors contributing to psoriasis-related disutility, such as physical, psychological, and social difficulties.

**Conclusion**

Psoriasis may be a very difficult and unpleasant illness for individuals who suffer from it. Fortunately, several tools and psoriasis treatments are available to both patients and caregivers to help alleviate symptoms and reduce the stress associated with the illness. A wide range of clinical trials and research studies are being conducted each year to explore the safety and effectiveness of a potential new treatment. However, it is important to realize that although therapies are beneficial, they do not constitute a cure. Additionally, they cannot cure psoriasis; therefore, it is critical to maintain proper skin care throughout one's life to avoid recurrent flare-ups.

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