CLINICAL PROJECT FOR
WSU STUDENTS

(PLAQUE PSORIASIS)

By

PATRICIA ANNE SITTIG-RUNGE

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To the Faculty of Washington State University:

   The members of the committee appointed to examine the clinical project of PATRICIA ANNE SITTIG-RUNGE find it satisfactory and recommend that it be accepted.

             Chair

             Laura John

             Ann Hunsch

             Zanette Hegg
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Abstract

This article explores the effects of current treatment modalities for plaque psoriasis, the application of the Health Belief Model to its management, and the concomitant ability to reduce the impact of the chronic disease. Patient education regarding proper care, implementation of alternative and standard therapies, and integration of patient-identified goals is explored. This education is critical to success in treating a chronic and recurrent disease. A brief summary of the disease process is given. Suggestions for raising the awareness of chronic disease education, especially in plaque psoriasis, are discussed. Tools to assist the nurse practitioner with applying the Health Belief Model and eliciting pertinent information to establish the diagnosis of psoriasis are included in the tables.
<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>1</td>
</tr>
<tr>
<td>Chronic Disease</td>
<td>1</td>
</tr>
<tr>
<td>Health Belief Model</td>
<td>2</td>
</tr>
<tr>
<td>Etiology of Psoriasis</td>
<td>4</td>
</tr>
<tr>
<td>Presentation of Psoriasis</td>
<td>5</td>
</tr>
<tr>
<td>Population at Risk</td>
<td>5</td>
</tr>
<tr>
<td>Demographics</td>
<td>5</td>
</tr>
<tr>
<td>Complications</td>
<td>6</td>
</tr>
<tr>
<td>Diagnostic Tests</td>
<td>7</td>
</tr>
<tr>
<td>Diagnostic Issues</td>
<td>7</td>
</tr>
<tr>
<td>Non-Drug Therapy</td>
<td>8</td>
</tr>
<tr>
<td>Standard Drug Therapy</td>
<td>9</td>
</tr>
<tr>
<td>Alternative Treatments</td>
<td>16</td>
</tr>
<tr>
<td>Occupational Safety</td>
<td>19</td>
</tr>
<tr>
<td>Oral Health</td>
<td>20</td>
</tr>
<tr>
<td>Preventative Measures</td>
<td>21</td>
</tr>
<tr>
<td>Health Promotion</td>
<td>23</td>
</tr>
<tr>
<td>Mental Health</td>
<td>25</td>
</tr>
<tr>
<td>Adherence to Therapies</td>
<td>26</td>
</tr>
<tr>
<td>References</td>
<td>37</td>
</tr>
</tbody>
</table>
List of Tables

Table 1
Identifying Forms of Psoriasis.................................30

Table 2
Standard Drug Therapy for Plaque Psoriasis...................31

Table 3
Quality of Life Questions.......................................33

Table 4
History, and Physical Examination with Differential Diagnosis........35
Background

Psoriasis is a common inflammatory skin disease that presents in many forms. Nurse practitioners have a responsibility to help patients with chronic plaque psoriasis determine, for themselves, what best constitutes wellness.

Wellness is generally considered to include physical, emotional, mental, and spiritual components of the state of being. Persons with moderate and severe psoriasis are prone to physical and mental forms of disability. Disabilities can range from inability performing the physical activities of daily living, along with the limitations imposed on work-related tasks due to mental depression.

The goal of interventions by the nurse practitioner is to help the person with psoriasis to identify and reduce injury and disability. Priorities of care should emphasize patient and family education, facilitation of patient participation in self-care, and promotion of optimal health. Psoriasis is a chronic disease that will require long-term management. Success with long-term management is enhanced when the patient has some feeling of control in the management of his treatment modalities.

Chronic Disease

Chronic disease management is a main presenting problem for patients seeking the services of nurse practitioners. Many contagious diseases are no longer threatening to the community because excellent reduction of these medical problems has been accomplished through several modalities: immunization programs and broad disease prevention education via active public health messages. Because of this reduction in communicable diseases, the nurse practitioner can expect to treat more chronic diseases such as plaque psoriasis.
Disability from plaque psoriasis, appropriate maintenance therapy, and implementation of alternative therapies are areas nurse practitioners will address with their patient population. Although plaque psoriasis cannot be prevented, proper maintenance and access to services helps prevent disability. Some of the disabilities from plaque psoriasis are anxiety, depression, and inability to maintain activities of daily living. The Health Belief Model (HBM) is beneficial in assessing health protection or disease prevention behaviors associated with management of chronic disease.

Health Belief Model

The Health Belief Model (HBM) was developed in 1950 and emphasizes the factors that determine why a patient may perform or refrain from certain behaviors in their quest for health. It acknowledges that health behavior is a function of knowledge and motivation.

The model is derived from social-psychological theory, primarily the work of Lewin, who conceptualized that the life space in which an individual exists is composed of regions, some having negative valence, some having positive valence, and others being relatively neutral. Illnesses are conceived to be regions of negative valence that can be expected to exert a force moving the person away from the region. Health-protecting behaviors are strategies for avoiding the negatively valenced regions of illness and disease (Freidman, 1999).

The underlying assumption of the HBM is that behavior is determined more by a person’s perceived reality than by the physical environment. The patient will take action or seek treatment when the potential effectiveness of treatment outweighs the negative feelings about the psoriasis.
The study by McKenna states that traditional methods of assessing the severity of psoriasis, such as the Psoriasis Area Severity Index (PSI), have high interobserver variability and do not reflect the impact of the disease on the person. Psoriasis that covers only a small part of the body area may possess a significant impact to one person, but another person with extensive disease may not feel so strongly.

When the model was developed it was as a direct concern expressed by the public and private health sectors that people were reluctant to use screening tests or other preventive measures to insure better health. When assessing the likelihood of change with patients the model helps in developing concrete plans tailored to the patient’s values.

The HBM emphasizes the concept that a patient’s motivation or readiness to follow prescribed therapies is highly individualized. Each patient holds a unique view on the severity of his or her psoriasis. In the Health Belief Model, motivation or readiness to act is determined by three components:

1. Threat (negative valence) - this is the reality that psoriasis is a recalcitrant and incurable disease. It is the patient’s perception of the severity and subsequent difficulties he/she is experiencing from their psoriasis.

2. Outcome expectations - patients often expect a “cure” for the disease. It is difficult for patients to grasp the concept that psoriasis is a disease than can go into remission but is not curable. Nurse practitioners need to educate their patients that adhering to prescribed therapies directly impacts remission of their disease. Patients must understand remission may occur but it is unlikely that complete cure of the disease is possible.
3. Efficacy expectations - patients often expect the disease to enter into permanent remission with use of their medical regimen. Complete remission is unlikely but limiting the number and severity of plaques is a realistic goal. The patient and nurse practitioner need to set mutual goals in the treatment of psoriasis. The patient and nurse practitioner need to establish a realistic goal of remission, and agree on the treatments to reach this goal. Rates of success of treatments are directly related to the desire of the patient to follow the prescribed treatment.

It is important to listen to perceptions the patient has formed regarding his/her condition, chronicity or recurrence, cure or control, severity of consequences, and the nature and frequency of symptoms. These perceptions need to be explored by both the nurse practitioner and the patient, understood, and included in the recommended treatment (Sheehy & McCarthy, 1998). Following is a discussion of the etiology of plaque psoriasis, complications, demographics, recommended treatments, and integration of the HBM in applying these treatments.

Etiology of Plaque Psoriasis

All forms of psoriasis are chronic, relapsing, and proliferate. Plaque psoriasis usually presents before age 20. Commonly a patient has a strong family history with HLA-associated inheritance. Plaque psoriasis is a genetically controlled, immune-modulated chronic disease resulting in rapid turnover of the epidermis (Cooper, 1999). This new tissue is immature. Epidermal thickening with silvery plaque formation results from the rapid turnover of immature skin cells. Plaque psoriasis will often co-exist with other forms of psoriasis. The complex disease process involves T-cell mediated cytokines and activated T-lymphocytes. More women than men contract the disease
Psoriasis affects all age groups and has been known to manifest in infancy.

**Presentations of Psoriasis**

The nurse practitioner encounters many forms of psoriasis, yet the most common is plaque psoriasis (see Table 1). The mechanism of growth remains unclear. Research continues looking into the contributions of genetics and immunology. Table 1 is included to serve as a reference in identifying the different forms of plaque psoriasis.

**Population at Risk**

Individuals with the genetic core expressing one of the serotypes of HLA B13, Cw6, and B17, the female sex type and Ashkenazi Jewish heritage are at the greatest risk to develop psoriasis. Patients with onset between ten and twenty years of age have a higher prevalence of HLA Cw6 (Farber, 1998). People carrying the specific genotype, regardless if they have expressed the disease, are part of the high-risk population. The annual incidence is estimated to be 60.2 per 100,000 (Farber & Nail, 1998). When a patient presents with psoriasis, the demographic variables of age, sex, race, and ethnicity are considered in analyzing the patients' beliefs regarding their perception of their disease process.

**Demographics**

Psoriasis is more prevalent in colder climates than in tropical regions. The National Psoriasis Foundation published the following statistics on psoriasis: Psoriasis affects 5 million people in the United States. Approximately 150,000, and 260,000 new cases are diagnosed annually. The average age of onset is 22.5 years with 10-15 percent of onset under age 10. Annual treatment cost for this condition is estimated to be between 1.6, and 3.2 billion dollars due to the approximately 11.5 outpatient visits per year.
Complications

Reducing complications is an important focus of the treatment plan for psoriasis patients. Psoriasis causes functional impairment and skin disfigurement, often leading to emotional distress. A severely disabling variant of psoriasis is Reiter's syndrome, a triad of symptoms which include urethritis, conjunctivitis, and arthritis as the dominant feature (Miller-Keane, 1992). This syndrome makes it very difficult for patients to perform activities of daily living.

Erythrodermic and generalized pustular psoriasis may be life-threatening because of systemic infections, cardiovascular, or pulmonary complications (Drake et al., 1993). If the patient views these complications as serious he may be motivated to seek treatment. If the patient does not feel at risk for this syndrome he may be less inclined to follow prescribed treatments. These perceptions are important for the nurse practitioner to recognize. Barriers to treatment are formed from personal perceptions. The nurse practitioner can help the patient examine these perceptions and barriers, and select actions that are agreeable to the patient for implementation. The result is the patient will have fewer complications while feeling a power of control over their treatment. When the nurse practitioner recognizes these perceptions and related barriers, she is able to effectively offer meaningful information to the patient that acts as a cue to help the patient reconsider the treatment options.

One of the most effective ways for a clinician to establish trust with the patient and eliminate barriers to treatment is through obtaining a thorough history and physical. The information obtained may also give insight into the perceptions formed by the patient regarding his/her disease. When taking a history from persons who present with psoriasis the information in Table 4 is important. The
variables and modifying factors can offer clues to the diagnosis and possible severity of the psoriasis. If the patient has nail pitting, and no other signs of psoriasis, but his family history is positive for psoriasis, the clinician can introduce the fact that the nail pitting is an early sign of psoriasis.

The practitioner can evaluate the patient's reaction to the diagnosis of psoriasis, and offer valuable information that gives the patient a solid base to establish a personal plan. If the patient does not believe the diagnosis, this is the opportunity for the clinician to use cues from the history such as the past experience of family members with psoriasis. The family members can offer personal information on living with psoriasis and the needed treatments. Often a patient will value family member information and be willing to act as a result of the other family member's experience. The patient now can take time to reflect on the information, ask questions, and establish personal goals in living with psoriasis. Following this careful history and physical, the discussion of diagnostic tests and diagnostic issues should occur.

**Diagnostic Tests**

Shave biopsy may be necessary to differentiate this disorder from other papulosquamous diseases. If joint inflammation is present, obtain rheumatoid factor levels, erythrocyte sedimentation rate, and uric acid levels (Uphold & Graham, 1998). These tests will guide the practitioner in making the diagnosis of psoriatic arthritis.

**Diagnostic Issues**

Psoriasis is one of several scaling disorders of the skin. It must be differentiated from atopic dermatitis, lichen simplex chronicus, pityriasis rosea, and fungal infections. Histopathology is often not definitive but family history may be significant. The
Diagnosis of psoriasis is a diagnosis of exclusion. Generally, it is made as a result of both a negative history and a negative test for fungus and other skin disorders. Complications may include underlying psoriatic arthritis, electrolyte disorders, scarring, psychosocial issues, and opportunistic infection of damaged skin (Tierney, 1999).

Infants with psoriasis may develop the disease in the neonatal period, generally presenting with redness in the diaper area that does not have the characteristic scale. It will often be an erythematous, symmetrical, well-marginated rash in the diaper area, especially inguinal and gluteal folds. Family history will assist in making this diagnosis. It will not respond to treatments for diaper rash. Children will commonly present with plaques on flexor surfaces of the elbows or knees after scraping them (the Koebner phenomenon). Nail pitting is a common and first presenting sign (NPF, 1999).

Non-Drug Therapy

Excellent skin care is imperative. The nurse practitioner should teach the patient to bathe in tepid water, and while the skin is still wet apply moisturizer to all body surfaces to help lock in moisture. Other measures include: A towel dry by patting the skin avoids further damage to the sensitive plaque areas. Protect the skin from injury with proper clothing, and sunscreen. Avoid use of scented soaps and fabric softener, as these are irritating to the plaques. Younger patients or patients with mild psoriasis may not see a benefit in protecting the skin. In that circumstance it is probable the patient does not perceive himself or herself as vulnerable to further exacerbations of psoriasis. Unless this perception is adjusted through cues to action such as advice from others, pamphlets on psoriasis, or personal experience it is unlikely the patient will take the recommended preventive health action of protecting the skin. The
clinician and patient can negotiate a treatment trial designed to protect a specified area of skin and use it as a test area. This area would be protected and moisturized. After a stated length of treatment the patient can compare the protected and unprotected skin sites. The patient will gather first hand information on the results of protecting the skin, and be able to make an informed decision on skin protection measures. If the patient is elderly or has physical restrictions that limit the ability to pat dry the skin or apply moisturizer, alternative ways to complete these actions can be discussed. If the patient takes a bath less frequently and secures the assistance of a home-health aide who can apply the moisturizers, the patient would be able to perform good skin protection measures.

Standard Drug Therapy

Treatment regimens include tar products, light therapy, steroids, methotrexate, and antibiotics. The majority of prescriptions nurse practitioners write for plaque psoriasis are for the topical therapies, the mainstay or gold standard of treatment. They are coal tar derivatives, anthralin preparations, corticosteroids, and light therapy (Federman et al., 1999). See Table 2 for recommended products and sample dosages. The results of the therapies will vary from patient to patient but it is unlikely that total remission will occur. If the patient needs referral for complicated systemic or light therapy it is best to collaborate with a specialist.

The patient must value the treatment decided upon. He/she needs to believe that the recommended action will result in effective management of the psoriasis. The clinician should present these treatments in a manner that acknowledges the beliefs that the patient holds, and help shape them so the patient will consider following the prescribed treatment regimen. The HBM is a useful tool in analyzing
personal health behavior and predicting health actions. The information will be implemented to assist with determining the treatment plan. The patient must be convinced that the treatment is effective yet not overly costly in terms of money or effort expended, and the results are worthy of the efforts put forth.

Drug therapy can present many barriers to the patient. Some of the barriers should be addressed by evaluating the patient's responses using the principals of the Health Belief Model. If the patient has difficulty remembering a complicated regimen, explore avenues to assist the patient in being successful in following the established drug protocol. If the patient reveals the problem is forgetfulness, the solution may be offering a pillbox with dates and times. Encourage the patient to express his concerns. Listen with empathy.

Open discussion about the difficulties of managing complex therapies gives the opportunity to elicit self-motivational statements. Complex treatments can involve daily application of topical ointments, light therapy two or three times weekly and oral medications. Open listening accompanied with a smile, a nod of the head, and verbal praise such as "you are doing a great job in handling all aspects of your care" encourages the patient to continue with the treatments.

**Retinoids and Combinations.**

Oral retinoids are used to treat plaque psoriasis. They work synergistically with many of the topical agents that contain tar or anthralin. The action of these drugs is not clearly understood, yet it is known that they down-regulate keratinocytic hyperproliferation in psoriatic epidermis (Chatham, 1999). Oral retinoids require close monitoring in childbearing age females due to their potentially devastating effects on the unborn fetus. A reliable form of birth
control is essential when prescribing this drug to this population. The oral bioavailability of the generation III retinoids ranges from 36-95%. The absorption is enhanced by fat rich foods (Chatham, 1999). Patients on acitretin should be encouraged to avoid a fat-free diet.

The nurse practitioner prescribing this class of drugs should order a hepatic panel, fasting blood sugar, lipid levels, and complete metabolic panel. This establishes a baseline for the patient and routine monitoring should be continued while taking retinoids. The nurse practitioner should consult with a dermatologist when considering this class of medication therapy. A patient who uses alcohol should not be considered for this treatment as alcohol clearly Koebnerizes the disease (Chatham, 1999). The Koebner phenomenon, also called the isomorphic effect, is cutaneous response of skin in certain dermatosis, such as psoriasis, lichen planus, and infectious eczematoid dermatitis, manifested by the appearance on uninvolved skin of lesions typical of the skin disease, at the site of trauma on scars, or at points where articles of clothing produce pressure (Dorlands, 1988). Use of alcohol may also cause liver injury. These drugs are metabolized in the liver and optimal organ health is important.

Chronic plaque psoriasis responds best to combination therapy; mild topical corticosteroids, preferably, with UV radiation, tar, PUVA (psoralens ultra violet alpha), or retinoids with PUVA. Maintenance therapies or retinoid therapy is recommended for six months to avoid rebound phenomena. Retinoids were originally introduced in the 1970's with acitretin introduced in 1980's (Saurat, 1999). Many studies have examined the cellular pathway of Vitamin A and its metabolites. Acitretin utilizes this pathway. It is believed, but not yet proven,
that metabolites of Vitamin A are found in psoriatic lesions. Retinols interrupt this cycle (Saurat, 1999).

**Corticosteroids.**

Corticosteroid therapy decreases the severity of the plaque lesions. The mode of action of topical steroids is uncertain but it is believed that topical steroids have multiple sites of action, both epidermal (anti-proliferative) and dermal (cytokine inhibition with or without direct effect on the cutaneous immune system) (Chatham, 1999). Adherence to the package application instructions will avoid severe reactions such as iatrogenic Cushing’s syndrome from systemic absorption, cutaneous atrophy, hypothalamic pituitary axis depression, and tachyphylaxis. The drugs most likely to elicit these reactions are the high potency steroids. Combination therapy consists of a varied and individualized regimen that combines the use of topical steroids, light therapy, and systemic therapy and is particularly effective when the topical steroid is administered by pulse dosing.

Combination therapy is an attempt to circumvent the cutaneous atrophy, hPA, side effects, and tachyphylaxis encountered with super potent topical steroid treatment of psoriasis, the concept of intermittent application or pulse-dosing was introduced (sic). During an induction phase that lasts three or four weeks, the medication is applied, usually twice daily. Once a substantial degree of remission is achieved, the steroid is applied three times weekly, at 12-hour intervals, for as long as control is maintained or until clearing is cosmopolite. This regimen is a significant advancement in the safety, and long-term maintenance of moderate plaque psoriasis with group I, and group II topical corticoids. (Feldman, 1999, p. 959)
Combination therapy can be particularly difficult for a patient to follow. When prescribing combination therapy, use reflective listening and elicit the patient's own goals and strategies to support self-efficacy in adhering to these difficult and complicated medication regimens. Examples of these barriers are cost of multiple drugs, knowledge deficit regarding the use of PUVA, and time needed to attend light therapy session. Assist the patient in obtaining support for the cost of the medications. Offer programs supported by pharmaceutical companies that sponsor patients with low income for needed medications. Provide information about benefits and risks of PUVA therapy. Show them pictures of patients who have received PUVA. Ask what perceptions the family members hold that have experienced PUVA therapy. Patients are often influenced by family members and are more likely to follow family recommendations. Listen discretely for other barriers to the PUVA therapy. The patient may be afraid of causing skin cancer from the additional exposure to light. Validate this concern and help the patient see the benefits of the PUVA. Suggest he protect the skin with sunscreens when outside, thus minimizing any further risk from light exposure. Suggest a time schedule for the PUVA that fits into the daily routine of the patient, and minimizes inconvenience. Praise the patient and reinforce positive actions.

Calcipotriene and topical corticosteroids.

Topical corticosteroid and calcipotriene 0.005% ointment, (Calcipotriol) an analogue of vitamin D3, was introduced in the United States in 1994. It is more effective than other monotherapies such as 0.05% fluocinonide ointment, short contact anthralin cream, and 15% coal tar. It does not have an immediate onset of action but takes approximately 6-8 weeks for response. The main adverse effect is skin
irritation which can be reduced with concurrent use of halobetasol propionate steroid 0.05%. A study using combined therapy of the analogue D3 and fluocinonide ointment showed a 76% remission rate compared with a 40% remission rate for placebo/steroid regimen. The combined applications limit the side effects of the corticosteroid (Lebwohl, 1997). One method would be to use the corticosteroid in the morning and the calcipotriene in the evening. Calcipotriol has been reported to affect the homeostasis of calcium (Ca+)(Bourke, 1997); therefore the serum Ca+ must be monitored when using this drug. These two drugs, a corticosteroid and calcipotriol, work synergistically with minimal side effects. High potency steroids are used once or twice daily and applied sparingly for a short duration, usually about two weeks. They can be used in combination with other medications and many varied regimens. A thorough discussion of other treatment modalities is outside of the scope of this paper but can easily be found through published references.

**Immunosuppressants.**

Cyclosporine is used for maintenance therapy in patients with severe psoriasis. It helps to suppress the growth of the immature skin cells. Shupack (1997) reports in his study that cyclosporine at 3.0 milligrams per kilogram of body weight per day (mg/kg/qd) prevented disease progression in 58% of patients with psoriasis for a six-month period. This was after their lesions cleared with an initial regimen of cyclosporine at 5.0 mg/kg/qd. Patients were monitored throughout the study with blood levels of aspartate aminotransferase (AST), alanine aminotransferase (ALT), blood urea nitrogen (BUN), and total bilirubin. Adverse reactions such as headache, paresthesia, and hirsutism were reported by 88% of the patients; cyclosporine use decreased lesion severity by 86%. The researcher reasoned that adverse
effects can be lowered if the doses are individually titrated by side effects and outcomes. They were not titrated during the study; therefore, subjects experienced more side affects then they would have if the drugs were titrated according to side effects and outcomes. Cyclosporines are absolutely contraindicated for persons with renal disease.

Methotrexate is indicated for use in severe plaque psoriasis as well as the pustular and erythrodermic forms of the disease. Careful monitoring must be done as methotrexate is hepatotoxic, requiring periodic liver function tests and a liver biopsy every 2-3 years (Cooper, 1999). Methotrexate inhibits cellular proliferation, slowing or eliminating the epidermal hyperproliferation. It is absolutely contraindicated for women who may become pregnant. Patients who do not want blood tests may not agree to use immunosuppressants, retinoids, and other medications that require routine liver function tests. Help the patient weigh the benefits of the medications against the inconvenience of the blood tests. Offer to prescribe these medications for the shortest duration possible while still helping the skin heal. Allow the patient to decide what level of skin with plaque is acceptable. Focus on a drug holiday or a minimized drug routine when this goal is reached while minimizing relapse.

Highlight the benefits of this therapy. Reduction in plaques may affect social acceptance. Physical activities may be more enjoyable and less restricted. The skin will be healthier and less likely to sustain damage.

The use of polytherapy, combining topical medications, systemic medications, and light therapy often is necessary to obtain satisfactory results. The addition of alpha hydroxy acids with the other topical medications is an effective polytherapy regimen. The use
of the alpha hydroxy acids enhances the salutary benefits of active ingredients in the other topicals. Daily lubrication is imperative. Lastly, adding PUVA for stubborn cases is very beneficial in reducing the severity of the plaques. In the summer, patients can use natural light in lieu of PUVA (Harris, 1999).

**Phototherapy.**

Apgar (1999) reported that PUVA treatment versus narrowband UV-B phototherapy showed that patients' psoriasis cleared better with PUVA treatment than with narrowband UV-B phototherapy. Twenty-one patients completed the nonrandomized, open paired comparison study.

The author concluded that clinicians should use PUVA as first line therapy for patients with moderate to severe plaque psoriasis as PUVA had limited side effects (minor nausea and less pruritis) than other therapies. To identify the potential development of squamous cell carcinoma careful skin monitoring is imperative. Incidence rates of squamous cell carcinoma varied from 1 to 4/1000 but it is difficult to state the carcinoma was a direct result of PUVA, only that the use of PUVA has the propensity to increase incidence of squamous cell carcinoma (Cooper, 1999, p. 163). Although this incidence rate seems excessive, this therapy is reserved for cases that do not respond to other treatments.

**Alternative Therapies**

**Humor.**

A "prescription" of therapeutic humor is a unique avenue that can be used very successfully. The use of humor is based on the discipline of psychoneuroimmunology or the study of the mind-body relationship (Farber, 1991). There are many health benefits of humor. Physiologically humor may benefit health by "stabilizing blood pressure, decreasing muscle tension, boosting the immune system by
increasing T-cell effectiveness, stimulating circulation, facilitating digestion, and increasing oxygen supply to muscles” (Moore, 2000, p. 36). The use of humor has not been studied in treating psoriasis.

Psoriasis is a disease involving T-cell dysfunction and it is hypothesized that the use of humor may help. The use of humor causes no harm and may prove to be of benefit in allowing patients to actively participate in the management of their disease. While stress has been shown to exacerbate psoriasis, humor can relieve stress and potentially mitigate the progress of psoriasis (Gupta, 1995). Humor as a therapeutic modality is a concept in need of further research.

Humor is a therapy that the patient can control. The patient must believe the theory that humor is beneficial. Discuss with the patient what factors in his life will change if he implements humor. Ask patients ways they can add humor to their care regimen. Humor may appear non-threatening and offer self-fulfillment in participation towards the state of wellness. It can be instituted in a variety of settings and is not costly.

Psychotherapy.

Recalcitrant psoriasis may be due to underlying emotional factors which should be considered after allergy, infection, or non-compliance to treatment regimens have been eliminated. One study cites a case of a 49-year-old man who had psoriasis unresponsive to all therapeutic measures including extended hospital-based day treatment. The purpose of the study was to determine whether insight-oriented psychotherapy would provide long-term cutaneous and psychiatric improvement.

The subject was diagnosed with depression along with his psoriasis. He received psychotherapy and sertraline along with the tar and anthralin. After four weeks of psychotherapy all psoriatic lesions
resolved, he remained free of lesions for 2½ year period without any topical medications. He did continue the sertraline and psychotherapy sessions (Koblenzer, 1995). In another very limited study four patients who had psoriasis and emotional distress because of their disease were referred for psychiatric evaluation. The only change in their treatment of the psoriasis was the addition of psychotherapy. Each patient served as his or her own control. Each patient had clearing of the previously recalcitrant psoriasis along with psychiatric improvement (Koblenzer, 1995).

The sociopsychological variable recognized in the HBM plays an important role in both psychotherapy and hypnotic therapy. Personality, social class, and peer pressure can influence the effectiveness of these treatments. Perceived pressures from social class and peers can directly contribute to depression secondary to body image concept. A patient may decline psychotherapy because it carries a stigma of a mental health disease. Review with the patient how depression has impacted his life. Ask him what changes in his life would he experience if the depression was lifted. Validate his reasons for experiencing depression and support his steps towards relieving the depression. Offer several therapeutic interventions to seek relief. These modalities should include psychotherapy, medication if needed, and activities that are enjoyable to the patient. Discuss the physical health benefits and mood lifting benefits of walking. Provide the opportunity to follow-up on the chosen therapies. Reinforce his attempts at self-efficacy.

**Hypnotic therapy.**

A very limited pilot study of 11 patients by Tausk and Whitmore suggests that highly hypnotizable subjects with stable, chronic, plaque psoriasis may benefit from hypnotic therapy. This study was a
3-month randomized, single blind, controlled trial of the use of hypnosis in adults with stable, chronic, plaque-type psoriasis.

Patients were randomized to two groups; one group received hypnosis with active suggestions of improvement and one group received hypnosis with no mention of their disease. Results indicated that patients that were highly hypnotizable showed improvement. Patients who could not be easily hypnotized did not show a large improvement (Tausk & Whitman, 1999). The article did not specify the extent of improvement. Further testing needs to be conducted with a larger group of subjects.

Occupational Safety

The person suffering from plaque psoriasis has many occupational considerations. Skin must be protected to prevent further injury and the formation of new plaques. Unintentional injuries can occur through exposure to chemical agents, abrasives, or irritating fumes. The broken skin is easily irritated and readily absorbs chemicals. Nurse practitioners must help the patient recognize hazards in his/her occupation, a first step in the developing an action plan for safe work practices. The employer may emphasize that the patient must take care of his skin to avoid occupational injury. The patient may miss work because of injuries received on the job. Potential loss of pay could be the motivating factor for taking the action of protecting the skin. Once the patient recognizes the potential for skin damage posed by his occupation, a plan to avoid further injury and to protect the skin can be created. The HBM is an excellent model to support health-protecting and disease-preventing behaviors that are important in the workplace. The patient must be ready to seek help or change in order to avoid illness or injury. The patients must perceive that a negative effect on their employment will exist if they do not change. Knowledge
about occupational hazards will help the patient make decisions to avoid injury and implement safe work habits. Cues to take this action may come from posters on employee injury prevention and reports citing company injury statistics. Benefits can include time off or cash rewards for injury free employment.

Oral Health

Oral involvement is not a common presentation of psoriasis but it still can occur. Good hygiene, use of non-irritating mouth products, and hydration will help prevent further injury. Routine dental screening exams should be recommended for preventative care. Screening exams offer the patient a higher degree of control and minimal inconvenience. A barrier to the routine dental exams is cost and time. If the patient does not have dental insurance or cannot afford the visit alternative resources for dental care should be offered. If the community has a dental school in the area the patient could seek low cost or no cost care at the school. The community may have a mobile dental van that offers routine screening. Mobile vans eliminate the barrier of transportation to a clinic.

Oral involvement of a disease is not easily viewed by others and often does not elicit a strong concern from patients. Adolescent patients may not value treatment for a disease that is not easily seen. Adolescents often are preoccupied with body appearance and fitting in with the crowd. Youth often carries with it the perception that one is invincible. Young people often do not perceive the seriousness of ignoring routine dental screening. They perceive peer approval as more important than family or authority figures. Friends could offer the information on dental care to the patient or accompany them to the visit. A younger child may be motivated to go to the dentist to receive a tangible reward. Many dentists offer a prize
drawer as a reward for cooperative behavior during the exam. Nurse practitioners can listen, acknowledge the perceived barriers, and present benefits that compliment the patient's perceptions.

Preventive Measures

Understanding the determinants of health-protecting behavior is critical for the development of effective interventions. Health professionals can use this knowledge to assist patients in altering behaviors that increase the risk for exacerbating their psoriasis.

Immunizations help prevent systemic disease which can exacerbate psoriasis. An example is immunization against Varicella to prevent the breakout of guttate psoriasis secondary to a systemic insult (NPF, 1999).

Eliminating preventable diseases is one step in helping the person with psoriasis reduce the extent of exacerbations. Staph skin infections are preventable with good skin care. Contact dermatitis, such as poison ivy, is easily acquired through the broken skin of psoriasis. The skin injured by the poison ivy is highly susceptible to secondary staph infections. A disease like Varicella, poison ivy, or herpes zoster superimposed on skin with psoriasis can easily result in a severe infection.

The patient may not understand the seriousness or possible severity of Varicella or poison ivy. The nurse practitioner can educate the patient of the potential devastating effects if they acquire either disease. The nurse practitioner can educate the patient regarding the benefits of Varicella immunization and good skin protection. This education encourages the patient to be pro-active in preventing complications from Varicella or poison ivy. The patient then takes direct responsibility for preventing disease. Benefits are feelings of self-efficacy and enjoying disease free skin.
Primary prevention allows for maximum input and control by the patient. One method of implementing primary prevention is to diminish injury to skin with psoriasis. Keeping the skin healthy, moisturized, and protected from further injury are non-invasive measures and promotes self-efficacy. The nurse practitioner can educate her patients by sharing this information with them, encouraging them to choose products for moisturizing, and selecting methods to protect their skin from injury.

Screening for complications is important to prevent long-term health damage. Because of the significant skin changes associated with psoriasis, early identification of pre-cancerous lesions is difficult. Teaching and performing preventative skin inspections with the patient can detect early pre-cancerous lesions. A case report of a 45-year-old man who had a long history of “psoriasis for which he had never sought treatment” is cited by Tran et al. (1998, p. 1). The subject did not receive PUVA therapy, a standard in treatment for psoriasis and associated with an increase of melanoma. A melanoma inside a psoriasis plaque on his upper left back was discovered. This melanoma was unrelated to light therapy and easy to miss because of the heavy establishment of plaque psoriasis. The lesion could have been discovered earlier had he sought regular treatment for his psoriasis, and had the practitioner performed and taught skin inspections. The HBM “asserts that even when individuals recognize personal susceptibility they will not take action unless they believe illness would bring serious physical or social repercussions” (Clark, 1996, p. 23). The patient did not see himself as at risk for skin cancer or that it was a serious matter. Specific teaching by the nurse practitioner about this complication may have found this problem earlier.
Very careful screening for skin cancer is necessary. Patient teaching on the identification of a melanoma or a suspicious lesion should be included. The patient is more likely to recognize a deviation from his normal skin state very early in the disease. Early identification of suspicious lesions enables rapid intervention and cure of the cancer. Because skin cancer is not prominent in all persons with psoriasis, the patient may not feel at risk for cancer and may not diligently inspect their skin. Patients should be convinced that early intervention in treating the disease reduces the expenditure in cost, discomfort, and disfigurement. These benefits should encourage them to seek medical attention. While applying daily skin treatments the patient can inspect the skin. Any new skin change can easily be detected and reported to the clinician. Lack of interest in performing skin inspections may mean that the patient does not feel at risk for skin cancer, or that he is powerless to affect the outcome. Careful exploration by the clinician may reveal the real motivation.

**Health Promotion**

**Physical activity and fitness.**

Psoriatic arthritis occurs in 5-8% of patients with psoriasis, although some estimates are as high as 30% (Griffiths, 1997, p. 409). It affects a unilateral joint and often limits the extent of physical activity because of the pain. Psoriasis is known to cause sleep difficulties due to pruritis (Fortune, 1998) and this loss of sleep can affect the energy needed for physical activities. Some activities require specialized equipment such as pads for football, which can irritate the scaling and flaking plaques. People with psoriasis are prone to further exacerbations secondary to the Koebner phenomena caused by injury from the pads sparking an outbreak. Therefore,
persons who suffer with psoriasis may be hesitant to participate in certain physical activities to avoid further injury to their skin (Weinstein & Krueger, 1993).

Physical fitness is important in overall health and well-being. The people with psoriasis must carefully choose their sports in order to benefit from the activity while avoiding injury to the skin. Swimming appears to be an excellent choice because it hydrates the skin, keeps it cool, and avoids stress on arthritic joints. An individual consideration is whether the person with psoriasis reacts to the chemicals in the pool. The response to the chemical may offset the benefit of the exercise.

Patients need to perceive themselves as at risk for increased health problems if they do not exercise (perceived negative state). Modifying factors can be peer pressure from friends who exercise. Next they must see the lack of exercise as a serious problem, and that it directly affects their health. The likelihood that the patient will embark in physical exercise depends on the perceived benefit of the action outweighing the negative aspect of getting tired, sweaty, or time consuming to exercise or play sports. The nurse practitioner can offer pamphlets about community exercise programs such as the YMCA.

Alcohol.

The ingestion of alcohol is known to exacerbate plaque psoriasis. It is not dose related and affects each person differently (NPF, 1999). The social environment of smoke filled areas and drinking alcohol can irritate existing plaques, creating new growth of plaques. Nonetheless, the clinician needs to inform the patient that drinking alcohol could precipitate an outbreak and encourage the patient to refrain from drinking (a cue to action). Offer alternative, non-alcoholic recipes to the patient. Listen carefully to barriers such as
peer influence and ethnic customs (modifying factors). Help the patient address these concerns while encouraging health maintenance by avoiding alcohol.

**Mental Health**

Six million four hundred thousand Americans suffer from psoriasis. A survey reported "54 percent of people with psoriasis reported feelings of self-consciousness, embarrassment, and anxiety in social situations" (NPF, 1999). The person with psoriasis "often does not attend social activities because he is uncomfortable with his skin condition in public situations" (Wahl, 1997, p. 430). Patients fear rejection or ridicule from others due to the appearance of their skin. Patients often have problems with interpersonal relations, and sexual relations secondary to their perception of their body image. Nurse practitioners should inquire about the psychosocial impact from their disease, and assist them with solutions, and resources to resolve these issues. Nurse practitioners should thoroughly discuss mental state changes with their patient. If depression exists it should be treated. In one study approximately half of the patients were found to have moderate to extreme levels of anxiety, depression, and anger (Wahl, 1997).

**Stress related exacerbations.**

Stress has shown to exacerbate psoriasis. Psoriasis-related daily stress represents chronic, recurrent, low-grade stress, or hassles that occur largely as a result of living with a chronic, disfiguring disease (Gupta, 1995). Harvima (1996) established that psychic stress is associated with exacerbation of psoriasis. Farber (1991) states that stress is a psychoneuroimmunology mediated response. He supports the idea that awareness of a patient's
psychologic distress, other chronic physical diseases, and attempts to treat them are undoubtedly helpful to the patient with psoriasis.

As a cue to action, nurse practitioners can ask patients to complete the Quality of Life Questions inventory used in the study by McKenna and Stern (see Table 3). The questionnaire can help target areas of stress not perceived by the patient. Physical, psychological, or social areas of stress can be identified and appropriate interventions explored based on the value of the finding to the patient. The practitioner can review the findings with the patient and jointly design interventions targeted to relieve the stress. Plaque areas may improve as the stress is relieved.

Biofeedback can be used to help the patient relieve stress. Advantages of the biofeedback intervention are minimal cost, the ability to perform the intervention at home or at work, and patient control over the treatment. Other avenues to relieve stress such as humor and hypnosis have been discussed early in this paper under alternative treatments.

Adherence to Therapies

Adherence to therapies and skin care regimens is critical to prevent additional plaques from forming. "Adherence to therapies is difficult as they usually are tar topical treatments that have an unpleasant odor, and take dedication to receive optimal results" (Richards, 1999, p. 582). The efficacy expectations of the patient are the key to adhering to most therapies. Tar therapies are smelly, time consuming, and messy; strong barriers for continued use. Many patients are not convinced that the barriers to tar therapy outweigh these personal objections. Benefits of low cost, privacy in use, and limited side effects need to be emphasized.
Patients with psoriasis must invest a significant effort to adhere with the necessary medication regimens. Great coping skills are needed to adjust to living with a chronic disease. Compliance with medication and treatment regimens is a complex and recurring problem for both patients and practitioners. In the study by Richards, comprised of 120 participants, 55% used topical treatments, 10% used systemic treatments, 2% used phototherapy, and 30% used combination treatment. Three percent were not currently using a treatment. The study was designed to examine self-reported compliance with medications in patients with psoriasis. Treatments were 0-4 times daily lasting 1 minute to 3 hours and 25 minutes. Forty-four percent of the patients would opt for systemic treatment if offered. Adherence to the prescribed therapy is the controlling factor to curing or diminishing the disease. Sixty-one percent of the population samples reported that they always complied with treatment regimens prescribed by their dermatologist, whereas 39% said that they “sometimes” or “never” complied. The non-compliers also rated their psoriasis as having a significantly greater impact on their daily life than those who complied with treatment, and more specifically, that treatment interfered with their life (Richards, 1999).

Richards (1999) indicated the patients who intentionally were non-compliant with treatment were more likely to believe that both psoriasis, and its treatment, interfered with their quality of life. This is consistent with the underlying assumption of the HBM that behavior is determined more by a person’s perceived reality than the seriousness of their disease. The patient may feel the psoriasis was not as bothersome as the disruption in their lifestyle when following treatment plans. Patients’ perceptions of their disease process directly affect their desire to follow treatment plans. The HBM
explains that the perceived benefit of preventive action (relief or diminishment of plaques) minus the perceived barrier (cost, time to administer the medications, or convenience of the medications) to the action will result in the likelihood of completing the action (the medication regimen). The cost could also be a barrier. The patient may not be able to purchase the medication or the cost may exceed the perceived benefit of the drug. The clinician should offer samples when available. If these samples result in relief, the diminished plaques will act as a cue to action for the patient to consider purchasing the medication. The perceived benefit (a positive valence) will motivate the patient to purchase the medication. The HBM helps the clinician identify modifying factors and assists the clinician to suggest interventions that might increase the patient’s desire to engage in health protecting behaviors.

Sociopsychological variables of the HBM are personality, social class, or peer pressure. These variables affect a patient’s decision to follow a prescribed regimen. The three percent who did not use a treatment did not value the benefit of treatment. They did not take the disease as seriously. The sociopsychological variables were not discussed in the study. Providers should consider these variables when assisting patients to design a treatment protocol. Patients will follow treatment plans that meet their personal needs. Reduction in the degree of psoriasis is directly related to following the prescribed therapies.

In summary, plaque psoriasis is a chronic disease presenting a challenge to the nurse practitioner and the patient. Treatments are varied and can be confusing, costly, and time consuming. The nurse practitioner should tailor the treatments based on desired outcomes and patient preference. The patient’s desire to seek care and follow
prescribed treatments can be analyzed utilizing the Health Belief Model. The use of this model will help the nurse practitioner discover the patient's perceived benefits of preventative action and any barriers to carry out this action. Understanding these perceptions assists the nurse practitioner in selecting treatment regimens that are likely to be carried out by the patient.

Nurses play a major role in helping clients implement healthy behaviors. Nurses help clients monitor health, supply anticipatory guidance, and impart knowledge about health. Nurses can also reduce barriers to action, e.g., by minimizing inconvenience or discomfort, and can support preventive actions. (Kozier, 1992, p. 239)

Nurses can assist the patient in discovering his true strengths in dealing with a chronic disease such as psoriasis. Through a healthy, open, and trusting patient/nurse practitioner relationship better disease control, less complications, and healthier skin will result.
<table>
<thead>
<tr>
<th>Type of Psoriasis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaque Psoriasis</td>
<td>Plaque psoriasis is white, and scaly. The skin is red underneath due to hypervasculization. The vascular endothelial cell growth factor (VEGF) results in increased angiogenesis (Karasek, 1999). Plaque psoriasis can appear on the scalp, the extensor surfaces of the extremities (knees, and elbows), the back, and buttocks. The eyebrows, axilla, umbilicus or anogenital region, and nails may be affected (Berkow et al., 1992)</td>
</tr>
<tr>
<td>Pustule psoriasis</td>
<td>Presents as blisters containing noninfectious pus. Widespread involvement is possible but it may appear only on the hands, and feet.</td>
</tr>
<tr>
<td>Guttate Psoriasis</td>
<td>Small red drop like lesions found on the trunk arms, and legs. Often precipitated by systemic infection.</td>
</tr>
<tr>
<td>Erythrodermic psoriasis</td>
<td>Severe form involving most or all body surfaces, developing into uncontrolled plaque psoriasis. Itching, and pain accompany it. It causes electrolyte disturbances, loss of body fluids and protein, and temperature disturbances, which most often require hospitalization. This is a potentially lethal form of psoriasis.</td>
</tr>
<tr>
<td>Inverse Psoriasis</td>
<td>Involvement of the flexural areas of the skin, such as the armpit and groin, are usually spared in the other forms.</td>
</tr>
<tr>
<td>Psoriatic Arthritis</td>
<td>A severe form of the disease that affects 10% of all psoriasis patients. The cutaneous involvement is accompanied by rheumatologic and articular abnormalities. It is generally unilateral.</td>
</tr>
</tbody>
</table>

Note: (NPF, 1999)
## Standard Drug Therapy for Plaque Psoriasis

<table>
<thead>
<tr>
<th>Topical Treatment</th>
<th>Severity of Psoriasis</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Potency Steroid</strong></td>
<td>mild</td>
<td>0.05% thin film BID</td>
</tr>
<tr>
<td>Alclometasone</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intermediate Potency</strong></td>
<td>mild-moderate</td>
<td></td>
</tr>
<tr>
<td>Fluticasone propionate</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High Potency</strong></td>
<td>moderate</td>
<td></td>
</tr>
<tr>
<td>Betamethasone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dipropionate emollient cream</td>
<td></td>
<td>0.05% thin film BID</td>
</tr>
<tr>
<td><strong>Super High Potency</strong></td>
<td>moderate to severe</td>
<td></td>
</tr>
<tr>
<td>Clobetasol propionate</td>
<td></td>
<td>0.05% thin layer BID</td>
</tr>
<tr>
<td>Tazorotene</td>
<td>Stable plaque psoriasis</td>
<td>0.05%, 0.1% apply thin film QD</td>
</tr>
<tr>
<td>Coal Tar 30%</td>
<td>mild to moderate</td>
<td>15-25ml to warm bath, immerse 15-20 minutes. Rinse, may follow with sunlight or UV light. Use 3-7 times weekly</td>
</tr>
<tr>
<td>Cyclosporine</td>
<td>Severe who have failed one other systemic treatment</td>
<td>Give QD Begin with &gt;18yrs 1.25mg/kg QD Advance bi-weekly after 4 weeks max 4.0mg/kg QD</td>
</tr>
<tr>
<td>Anthralin</td>
<td>Chronic psoriasis</td>
<td>Begin with 0.1%, sparingly QD may advance to 0.25%, 0.5%, 1.0%</td>
</tr>
<tr>
<td>Calcipotriene</td>
<td>Moderate</td>
<td>0.005% thin layer BID</td>
</tr>
<tr>
<td>Leucovorin calcium</td>
<td>Severe</td>
<td>25mg once weekly Liver biopsy needed. Folic acid 5mg for nausea</td>
</tr>
<tr>
<td>Acitretin</td>
<td>Severe</td>
<td>0.5-1mg/kg/d Check liver enzymes, and lipids. Best when combined with UVB or PUVA</td>
</tr>
</tbody>
</table>

Table 2 continued
Table 2 continued

Standard Drug Therapy for Plaque Psoriasis

The selected treatment(s) from this table will be determined by discussion with the patient to determine barriers to a treatment. The clinician can match the treatment to the likelihood of the patient taking the action by considering the modifying factors, and perceived seriousness of the psoriasis versus the barriers that outweigh the treatment.

Note: Topical treatments are for psoriasis that involves less than 30% of the body (Tierney et al., 1999; NP Prescribing Reference, 1999).
Table 3

Quality of Life Questions

Physical

1. How much do you feel the current extent of your psoriasis affects you in your daily life?
2. How much discomfort have you experienced from your psoriasis during the past month?
3. How much did the discomfort from your psoriasis interfere with your normal work during the past month?

Psychological

4. How much of the time did you enjoy the things you have done in the past 1-month?
5. How often have you felt that nothing turned out the way you wanted it to in the past month?
6. How much do you feel physically unattractive, and/or sexually undesirable when your psoriasis is bad?
7. How much do you feel embarrassed or ashamed because of your psoriasis?
8. How much do you feel like an outcast because of your psoriasis?
9. How much has your psoriasis resulted in you smoking or drinking alcohol more than you would normal?
10. When your psoriasis improves after intensive treatment, how much better do you feel about yourself?
11. Currently, how concerned are you about your psoriasis?

Social

12. Has your physical or emotional health interfered with your normal social activities with others during the past month?
Table 3 continued

Quality of Life Questions

13. How much friction do you feel in your family life because of your psoriasis?
14. How often has your psoriasis or its treatment resulted in you avoiding social activities?
15. How much has your psoriasis made it difficult for you to make new friends?
16. How much has your psoriasis interfered with holiday or travel plans?

Responses to question graded 1-5: 1=none, 2=some, 3=moderately, 4=quite a bit, 5=extreme

QOL=Physl/e+Psych/S+Socl/ (add these totals)

The higher the number the more severely they are impacted (McKenna & Stern, 1997).

This questionnaire helps to determine the level of the perceived threat to daily living. It addresses modifying factors and can be applied to recommending a preventive health action that offsets some of the barriers identified in this questionnaire.
Table 4

Elements of a History, and Physical with Diagnosis

<table>
<thead>
<tr>
<th>History</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inquire about onset, duration, location, and appearance of lesions;</td>
<td></td>
</tr>
<tr>
<td>ask whether there are bleeding points when thick scale is removed.</td>
<td></td>
</tr>
<tr>
<td>2. Nail pitting. Symptoms of arthritis, especially if in DIP joints of</td>
<td></td>
</tr>
<tr>
<td>fingers or toes.</td>
<td></td>
</tr>
<tr>
<td>3. Past history of chronic dandruff, and about scaling of external ear</td>
<td></td>
</tr>
<tr>
<td>and canal.</td>
<td></td>
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<tr>
<td>4. In children and young adults with abrupt onset of symptoms,</td>
<td></td>
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<tr>
<td>determine if there has been a recent streptococcal infection (i.e.,</td>
<td></td>
</tr>
<tr>
<td>pharyngitis).</td>
<td></td>
</tr>
<tr>
<td>5. HIV status in cases where onset is abrupt. Treatments tried,</td>
<td></td>
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<tr>
<td>results of those treatments, and which does the patient prefer.</td>
<td></td>
</tr>
<tr>
<td>6. Review past medical history, particularly the presence of other</td>
<td></td>
</tr>
<tr>
<td>autoimmune disorders.</td>
<td></td>
</tr>
<tr>
<td>7. Assess the impact of the disease on the patient’s quality of life.</td>
<td></td>
</tr>
</tbody>
</table>

Physical Examination

1. When performing a physical examination include: the entire body surface, beginning with the scalp, and including the soles of the feet.

2. Look for characteristic lesions, particularly on extensor surfaces. Keep in mind that the symmetry of distribution and the classic silvery scale are hallmarks of the plaque form of psoriasis, by far the most common variation. In children the flexor surfaces of the elbows or knees will form plaques after the children have scraped them (the Koebner phenomenon). In infants the diaper area is a common site for the first lesions. This area generally does not have the characteristic scale of psoriasis.

3. Use a tongue blade to scrape the lesion’s surface to elicit the fine pinpoint bleeding.

Table 4 continued
Table 4 continued

Elements of a History, and Physical with Diagnosis

4. Quantify the extent of the disease by using the size of the palm of the patient’s hand as a guide to estimate percentage of the body surface affected (the palm is typically one percent of body surface).

5. Examine nails for pitting, and joints in fingers, and toes for inflammatory changes.

Differential Diagnosis

1. Seborrhea dermatitis is characterized by redness, and scaling occurring in regions where the sebaceous glands are most active, such as the face, and scalp and in the body folds. In the scalp it causes flaking, i.e., dandruff.

2. Nummular dermatitis is a chronic, pruritic, inflammatory dermatitis occurring in the form of coin shaped plaques composed of grouped small papules, and vesicles on an erythematous base, especially common on the lower legs of older males during winter months: often seen in atopic individuals.

3. Atopic dermatitis is an acute, subacute, but usually chronic pruritic inflammation of the epidermis, and dermis, often occurring in association with a personal or family history of have fever, asthma, allergic rhinitis, or atopic dermatitis.

4. Pityriasis rosea is an acute exanthematous eruption with a distinctive morphology, and often with a characteristic course. First, a single (primary or “herald” plaque) lesion develops, usually on the truck, and 1 or 2 weeks later a generalized secondary eruption develops in a typical distribution pattern: the entire process remits spontaneously in 6 weeks without any therapy.
References


