DIFFERENTIAL DIAGNOSIS

Diagnosis of psoriasis is usually straightforward and based on typical clinical features alone. However, in certain cases, depending on the type and site of lesions, the following diseases may need to be considered in the differential diagnosis:

Seborrhoeic dermatitis	Lichen simplex
Pityriasis rubra pilaris	Secondary syphilis
Leprosy	Lichen planus
Candidiasis	Tinea corporis and cruris
Discoid lupus erythematosus	Bowen's disease
Cutaneous T-cell lymphoma	Hyperkeratotic eczema of hands and feet
Pityriasis rosea	Parapsoriasis

TREATMENT

Since psoriasis is a chronic disease, therapy is long-term. There are many treatment options available. Treatment regimens must be individualized according to age, sex, occupation, type and extent of disease and available resources.

Three main modalities of therapy are used: topical, phototherapy and systemic agents. These are used either alone or in combination.

TOPICAL THERAPY - Outpatient topical therapy is the first-line approach in the treatment of plaque psoriasis.

Topical steroid: A potent topical steroid, applied twice a day is effective in controlling limited plaque psoriasis. Intralesional injection of triamcinolone acetonide into isolated chronic plaques may also be used.

Anthralin (Dithranol): Derived from chrysarobin (active ingredient of Goa powder, derived from the bark of South American Araroba tree), it has antiproliferative and immunosuppressive action. It is best applied as short-contact therapy (washing off the medicine after a contact period of 10 to 30 minutes). Dithranol is irritant and can stain cloth. It causes a reversible brownish pigmentation of the treated skin.

Vitamin D3 analogues: Calcitriol and **Calcipotriol** are as effective as topical steroids and anthralin. These act by regulating keratinocyte proliferation and maturation. Side effects include irritation and hypercalcemia and kidney stones with high doses.

Retinoids: The synthetic retinoid **Tazarotene** when used topically can regulate keratinocyte proliferation and maturation. The main side effect is irritation. Special precaution: women of child-bearing age.

Coal tar: Tars have antiproliferative effect. There may be combined with steoid therapy. Coal tar solution may be used for scalp psoriasis.

Salicylic acid: As a two to ten per cent ointment, often combined with topical steroids, it helps remove scales and also helps in penetration of steroids.

PHOTOTHERAPY - Phototherapy is used in the cases of extensive, widespread disease resistant to topical treatment Proper facilities are required for the two main forms of phototherapy.

- **UVB - Ultraviolet B (UVB) irradiation** utilizes ultraviolet radiation with wavelengths 290-320 nm (visible light range is 400-700 nm). It is used alone or combined with one or more topical treatments. The **Goeckerman regimen** uses coal tar followed by UVB exposure and the **Ingram method** is based on anthralin application following a tar bath and UVB treatment. UVB more commonly is now combined with topical corticosteroids, calcipotriene, tazarotene, or simply bland emollients. UVB phototherapy is extremely effective for treating moderate-to-severe plaque psoriasis. **Narrow-band UVB** (UVB of 311 nm wave length) is now increasingly used for its effectiveness and low potential for photodamage.

- **PUVA photochemotherapy** - In this therapy (also known as PUVA), a photosensitizing drug methoxsalen (8-methoxypsoralens) is given orally, followed by ultraviolet A (UVA) irradiation to treat patients with more extensive disease. UVA irradiation utilizes light with wavelengths 320-400 nm. PUVA, decreases cellular proliferation by interfering with DNA synthesis, and also induces a localized immunosuppression by its action on T lymphocytes... Therapy usually is given 2-3 times per week on an outpatient basis, with maintenance treatments every 2-4 weeks until remission. Adverse effects of PUVA therapy include nausea, pruritus, and burning. Long-term complications include increased risks of photo damage and skin cancer. PUVA has been combined with oral retinoid derivatives to decrease the cumulative dose of UVA radiation to the skin.

SYSTEMIC THERAPY - Systemic treatments are used when both topical treatments and phototherapy have failed. These are also useful in patients with very active psoriatic arthritis, erythrodermic psoriasis and generalized pustular psoriasis. Patients who have disabling disease through physical, psychological, social,

or economic means also are considered candidates for systemic treatment.

Antimetabolites: **Methotrexate** is the most popular agent used. A weekly oral or intramuscular dose of 15 to 25 mg is used. Started with low dose and gradually increased to the desired dosage. 5mg 12 hourly X 3 doses per week is the usual oral regimen. A complet blood count (CBC), platelets, LFT, urinalysis, and creatinine must be normal before starting therapy. These tests are repeated at regular intervals to monitor toxicity. The main side effects are nausea, vomiting, hepatic dysfunction (even fibrosis on long term therapy), and microcytic anemia. **Hydroxyurea** is the alternative antimetabolite. It is more toxic than methotrexate and rarely used**.**

Acitretin: A synthetic vitamin A derivative which is used in a dose of 10 to 20 mg/day and gradually increased to the maximum dose of 50mg/day. The main side effects are: teratogenicity (the drug should not be used in women of child-bearing potential), hypertriglyceridemia, xerosis of skin, chelitis and alopecia. It may be used in combination with phototherapy, methotrexate or cyclosporine.

Cyclosporine: this drug selectively inhibits T-helper cell production of IL-2 and thus exerts an immunosuppressive effect. The usual dosage is 3 to 6mg/kg per day. A new microemulsion formulation may be used in a lower dosage. The commonest side effects are hypertension and nephrotoxicity.

Mycophenolate mofetil: This newly introduced drug inhibits synthesis of the nucleotide guanosine. The recommended dosage is500mg four times a day with a maximum dose of 4 gm. side effects are: teratogenicity, neutropenia, GI symptoms, and opportunistic infections. It is however still under evaluation.

Sulphasalazine may be used to treat psoriasis either alone or combined with methotrexate, particularly in psoriatic arthropathy.

COMPLICATIONS

Complications are relatively uncommon and a significant majority are mostly due to inappropriate and aggresive therapy. They include the following:

- Psoriatic arthritis.
- Pustular psoriasis.
- Erythroderma and its metabolic complications.
- Infection, particularly Staph infections of the patches.
- Eczematization due to topical agents.
- Amyloidosis, rare sequel to arthropathic of pustular psoriasis.
- Psychological consequences: depression, anxiety, lack of self-esteem.

Potential complications of systemic therapy should not be overlooked.

PROGNOSIS

- The course of plaque psoriasis is unpredictable. The duration of active disease, the time or the frequency of relapses, or the durations of a remission are unpredictable. The disease is rarely life threatening, but is often intractable to treatment with relapses occurring in the majority of patients.
- Both early onset and family history of disease are considered poor prognostic indicators. Some suggest that stress also is associated with an unfavorable prognosis.