Psoriasis

Psoriasis is a genetic disorder of the skin that affects 1% of the population, which means in Bangalore with a population of 60 lakhs, there would be 60000 people with psoriasis. By genetic disorder is meant a disorder resulting from defect in the gene and not necessarily hereditary. Many people with psoriasis may have another family member with psoriasis. Through a genetic disorder, psoriasis begins in 80% of the people who get it after the age of 30 about 10% get it before 30 years of age and 10% after 60 years of age. Any age factors seems necessary for the gene to express itself. If one parent has psoriasis, the chance of the child getting it is about 16% and if both parents have it, the risk is around 50% or over.

Psoriasis is unpredictable in its behavior, meaning that it is hard to say in a given individual with freshly diagnosed as to how his or her skin will behave. It is comforting to know that of all the people who have psoriasis, 70 to 80% will have localized psoriasis, meaning involvement of less than 20% of the body surface area. Psoriasis remits i.e. clears with treatment and recurs. Once treated, psoriasis stay away for a period ranging from 2 months to a year or so, and then comes back in the same or different area. It would be reasonable to say that 60 to 70% of people with psoriasis will enjoy remissions of around a year once the patches are cleared. The remaining may enjoy longer remissions, almost all dermatologists will know of patients who have had remissions of 5, 7, 10 or even 30 years. A small number may require constant attention to keep their skin clear and prevent it from interfering with their day-to-day activities. Upto 59% of patients with psoriasis get spontaneous remissions, viz the patches disappear without any treatment, however, immaterial of whether the remission is spontaneous or treatment induced, recurrences are the rule in most people with psoriasis. If one were to clear of lesions, the remaining will be on the way to a remission are recurrence. This means that having psoriasis implies setting aside 10 to 30 minutes a day for skin care in addition the regular time set aside for toilet and grooming.

20 to 25% of patients with psoriasis get joint pain and about 7% get joint swelling and deformity. This is because the same thing that happens in the skin also happens to the joint lining. About 30% get involvement of the nail, because the tissue that produces the nail is derived from the skin.

What exactly happens in the skin with psoriasis? The diagram (fig 1) below gives a very simplified view. Please stop at the end of every sentence and look at the diagram for clear understanding. The skin has 2 layers. The upper layer is called epidermis and the lower-layer is called dermis. The epidermis is made of cells and the dermis is made of fivers. Most of the changes in psoriasis are in the epidermis. The lower most layer of the epidermis called the basal layer and it produces the rest of the epidermis, this happens with the basal cells dividing and pushing the cells towards the surface of the skin from where it invisibly sheds and is washed away while bathing and cleaning. The basal layer cell takes about 4 weeks to reach the top. In psoriasis this happens in 4 to 5 days, which is because a normal basal cell divides into 2 in 100 hours whereas the psoriatic basal cell
divides into 2 in 36 hours. The normal skin has a single layer or dividing cells whereas the psoriatic skin has 2 or 3 layers of dividing cells. In the normal skin 60% of the cells are in the dividing phase as against almost 100% in psoriatic skin. All this results in localized areas of
excessive skin production that gets heaped up and flakes away. When seen under the microscope, the skin with psoriasis looks like in fig2. In addition the block vessels in the skin are dilated and thin walled as opposed to the narrow think walled block vessels in the normal skin hence the psoriasis patches look pink (fig2). Because of the change in the epidermis and the dermis, the epidermis overlying the blood vessels will have become very thin and scratching lead to this layer being easily torn, resulting in a raw area. All this happens because the genes meant to control and regulate the immunity of the skin, skin production and growth are unable to do it properly and hence the skin performs abnormally resulting in what is seen as psoriasis patches. Whenever any treatment is given, the abnormalities listed above are reversed for while, ie a remission is induced. As the genes cannot be corrected, with currently available medicines, cure cannot be assured. That may change in a few years with the advances in genetics. You can read more about the recent advances in the genetics of psoriasis at www.psoriasis.org which is also the most genuine site for all information on psoriasis. Recent research indicated that psoriasis is likely disorder of the immune system. This system includes a type of white blood cell, called a T cells that normally helps protect the body against infection and disease. Scientist now know that, in psoriasis, an abnormal immune system causes increased activity of white blood cells called T cells in the skin. These T cells trigger the inflammation and excessive skin cell production seen in people with psoriasis.

Doctors usually diagnose psoriasis after a careful examination of the skin. However, diagnosis may be difficult because psoriasis can look like other skin diseases. A pathologist may assist with diagnosis by examining a small skin sample (biopsy) under a microscope.

There are certain do’s and don’ts for prolonging remissions and making management of psoriasis that much easier.

The following factors are known to worsen psoriasis:

Alcohol, tobacco, winters, dry skin, severe hygienic measures, excessive rubbing and scrubbing, scratching, using very hot water to cleanse the skin or to relieve the itch in psoriasis. Physiological stressors include pregnancy, surgeries, and infectious diseases. If you have painful teeth, cavities or swollen gums, sore throat, cough, loose motions, burning in the urine, vaginal discharge, boils on the skin, apprise your doctor of this and have it attended to at the earliest.

The following drugs are known to worsen psoriasis or precipitate it in those who are predisposed to psoriasis:

- Glucocorticosteroids by mouth or injection
- Potent locally applied steroid creams / ointments
- Beta-blockers
- Antimalarials
ACE inhibitors
Indomethacin
Pain killers (NSAIDS)
Lithium
Gemfibrozil
Gold salts

Consider leaving a copy of this list with your family physician, paracetamol in limited quantities can be used to treat fever or pain.

What treatments are available for psoriasis? Doctors generally treat psoriasis in steps based on the severity of the disease. The extent of the areas involved the type of psoriasis, or the patients responsiveness to initial treatments. This is sometimes called the “1-2-3” approach. In step 1, medicines are applied to the skin (topical treatment). Step 2 focuses on light treatments (Photo therapy). Step 3 involves taking medicines internally usually by mouth (systemic treatment).

Topical treatments applied directly to the skin are sometimes effective in clearing psoriasis. Doctors find that some patients respond well to sunlight, corticosteroid ointments, medicines derived from vitamin D3, vitamin A (retinods), coal tar or anthralin. Other topical measures such as bath solutions and moisturizers, may be soothing but are seldom strong enough to clear lesions over the long term and may need to be combined with more potent remedies.

Psoriasis is best faced with a measure of equanimity in that, when a patch is noted, it is no cause for fear, for treatment can rid you of it, and a cleared patch is no cause for celebration, as a new lesion can occur there or elsewhere someday. The focus is to keep psoriasis from coming in the way of your routine, livelihood and quality of life, with the means available.

Many alternative systems of medicine have effective treatments for psoriasis to the point of inducing remissions, but none can cure it as matters stand today, immaterial of what is promised Quacks abound in the real world and on the net. Be wary of those who promise you what you wish to believe, and love to hear.
What is psoriasis and how common is it?
Psoriasis is a genetic disorder of the skin that affects 1% of the population, which means in Bangalore, with a population of 60 lakhs, there would be 60,000 people with psoriasis.

Is it hereditary?
By genetic disorder it means a disorder resulting from defect in the gene and not necessarily hereditary. Many people with psoriasis may have another family member
with psoriasis. Though a genetic disorder, Psoriasis begins in 80% of people who get it after the age of 30, about 10% get it before 30 years of age and 10% after 60 years of age. An age factor seems necessary for the gene to express itself. If one patient has psoriasis, the chance of a child getting it is 16% and if both parents have it, the risk is around 50% or over.

Type 1 psoriasis occurs in younger age, being more common in girls, usually with paternal inheritance and can be more extensive and difficult to treat. Type 2 Psoriasis occurs in later age and is generally more ‘quiet’.

Is psoriasis infectious?
It is not an infection and does not spread from person to person.
Our current understanding is that it is a genetically determined disorder of incorrect immune function resulting in inflamed, red, scaly skin.

Is it true that psoriasis can never be cured and has to be endured?
Psoriasis is unpredictable in its behavior, meaning that it is hard to say in a given individual who is freshly diagnosed, as to how his or her skin will behave. It is comforting to know that of all the people who have psoriasis, 70-80% will have localized psoriasis, meaning involvement of less than 20% of the body surface area. Psoriasis remits, ie, clears with treatment and recurs. Once treated, Psoriasis stays away for a period ranging from 2 months to a year or so, and then comes back in the same or different area. It would be reasonable to say that 60-70% of people with psoriasis will enjoy remissions of around a year, once the patches are cleared. The remaining may enjoy longer remissions, almost all dermatologists will know of patients who have had remissions of 5, 7, 10 or even 30 years. A small number may require constant attention to keep their skin clear and prevent it from interfering with their day-to-day activities. Upto 50% of patients with psoriasis get spontaneous remissions, viz the patches disappear without any treatment. However immaterial of whether the patches disappear spontaneously or with treatment, recurrences are the rule in most patients with Psoriasis. If one were to look at the entire population with psoriasis at a given point of time, roughly 25-30% will be clear of lesions, the remaining will be on the way to a remission or recurrence. This means that having Psoriasis implies setting aside 10-30 minutes a day for skin care in addition to regular time set aside for toilet and grooming.

Can a person die of psoriasis?
Two types of severe psoriasis called erythrodermic psoriasis and generalized pustular psoriasis are known to be capable of causing death due to the acute and severe burden they place on the body’s metabolism, various organ systems and the heart. With modern medication, in patient care and intensive care, these risks are significantly reduced.

Does psoriasis involve other organs?
20 to 25% of patients with Psoriasis get joint pains and about 10% get joint swelling and deformity. This is because the same thing that happens in the skin also happens to the joint lining. About 30% get involvement of nail, because the tissue that produces the nail is derived from the skin.
What exactly happens in the skin with Psoriasis?

This diagram (fig 1) below gives a very simplified view. Please stop at the end of every sentence and look at the diagram for clear understanding. The skin has two layers. The upper layer is called epidermis and the lower layer is called dermis. The epidermis is made up of cells and the dermis is made of fibres. Most of the changes in Psoriasis are in the epidermis.
Normal skin
4 weeks

Epidermis
Basal cells
Single layer of dividing cells
Cell divides into 2 in 100 hours

Dermis

Psoriasis
4 days

2-3 layers of dividing cells
Cell divides into 2 in 36 hours

Fig. 2

Normal skin

Psoriasis
Thin walled large vessel
Thin epidermis

Thick walled narrow normal vessels
The lower most layer of the epidermis is called the basal layer, and it produces the rest of the epidermis. This happens with the basal cell dividing and pushing the cells towards the surface of the skin from where it is invisibly shed and is washed away while bathing and cleaning. The basal layer cell takes about 4 weeks to reach the top. In Psoriasis, this happens in 4-5 days, which is because a normal basal cell divides into 2 in 100 hours, whereas the psoriatic basal cell divides into 2 in 36 hours. The normal skin has a single layer of dividing cells, whereas the Psoriatic skin has 2 or 3 layers of diving cells. In the normal skin, 60% of the cells are in the diving phase as against almost 100% in the Psoriatic skin. All this results in localized area of excessive skin production that gets heaped up and flakes away. When seen under the microscope, the skin with Psoriasis looks like in Fig 2. In addition, the blood vessels in the skin are dilated and thin-walled, as opposed to the narrow thick – walled blood vessels in the normal skin. Hence the Psoriasis patches look pink (Fig 2). Because of the change in the epidermis and the dermis, the epidermis overlying the blood vessels will have become very thin and scratching leads to this layer being easily torn, resulting in a raw area.

The dilated blood vessels lead to leakage of white cells which get attached to the abnormal basal cells of the Psoriatic skin. This attachment triggers off the abnormal proliferation of the basal cell. Environmental, chemical and bacterial stimulus can also trigger the basal cells in a similar fashion. All this happens because the genes meant to control and regulate skin production and growth are unable to do it properly and hence the skin performs abnormally resulting in what is seen as psoriasis patches.

Normally the skin cells in the upper layers of the epidermis are closely packed and this close contact between the cells is a signal for the basal cells to slow down the division. However in the psoriatic skin, the cells lose this contact between each other, so the basal cells ‘mistakenly’ continue proliferating in an unlimited fashion. Whenever any treatment is given, the abnormalities listed above are reversed for awhile. That is, remission is induced.

**Why can doctors not promise an outright cure for psoriasis?**

As the genes cannot be corrected with currently available medicines, cure cannot be assured. This may change in a few years with advances in genetics. You can read more about the recent advances in the genetics of Psoriasis at [www.psoriasis.org](http://www.psoriasis.org), which is also the most genuine site for all information on Psoriasis. Recent research indicates that Psoriasis is a likely disorder of immune system. This system includes a type of white blood cells called as T-cells that normally helps protect the body against infections and diseases. Scientists now think that in Psoriasis, an abnormal immune system causes activity by T-cells in the skin. It is not yet clear what triggers the T-cells to act this way but these T-cells lead to inflammation and excessive skin production seen in people with Psoriasis. In a genetically predisposed person, an inflamed and irritated (no thanks to T-cells), is more prone to Psoriasis. This ‘inflammation’ can be environmental or emotional. Newer biotech treatments aimed at the T cells and the substances produced by them are now available and are vastly superior to the treatments currently in use.
**How is psoriasis diagnosed?**
Doctors usually diagnose Psoriasis after a careful examination of the skin. However, diagnosis may be difficult because Psoriasis can look like other skin diseases. A pathologist may assist with diagnosis by examining a small skin sample (biopsy), under a microscope.

**Is there anything a person with psoriasis can do to control his or her disease?**
There are certain **Do’s** and **Dont’s** for prolonging remissions and making management of Psoriasis much easier.
The following factors are known to worsen Psoriasis:
Alcohol, tobacco, winters, dry skin, severe hygiene measures, excessive rubbing and scrubbing, scratching, using very hot water to clean the skin or to relieve the itch in Psoriasis. Physiological stressors include pregnancies, surgeries and infectious diseases.
If you have painful teeth, cavities or swollen gums, sore throat, cough, loose motions, burning in the urine, vaginal discharge, boils in the skin, apprise your Doctor of this and have it attended to at the earliest.

**Are there any drugs that people with psoriasis may consider avoiding?**
The following drugs are known to worsen Psoriasis or precipitate it in those who are predisposed to Psoriasis:

- Glucocorticosteroids, by mouth or injection
- Potent locally applied steroids creams/ointments
- Beta-blockers
- Antimalarials
- ACE Inhibitors
- Indomethacin
- Painkillers (NSAIDs)
- Lithium
- Gemfibrizol
- Gold salts

Consider leaving a copy of this list with your family physician. Paracetamol in limited quantities can be used to treat fever or pain.

**What treatments are available for Psoriasis?**
Doctors generally treat Psoriasis in steps, based on the severity of the disease. The extent of the areas involved, the type of Psoriasis or the patient’s responsiveness to the initial treatments. This is sometimes called the ‘1-2-3’ approach. In step 1, medicines are applied to the skin (topical treatment). Step 2 focuses on light treatment (Phototherapy). Step 3 involves taking medications internally, usually by mouth (systemic treatment).
What are topical treatments?
Topical treatments applied directly to the skin are sometimes effective in clearing Psoriasis. Doctors find that some patients respond well to sunlight, corticosteroid ointments, medicines derived from Vitamin D3, Vitamin A (Retinoids), coal tar, or Anthralin. Other topical measures such as bath solutions and moisturizers, maybe soothing but are seldom strong enough to clear lesions over the long term and may need to be combined with more potent remedies.

What is new in the treatment of psoriasis?
Today patients also have the option to use Biological Therapies, the newest treatment option for Psoriasis, with the least side-effects and they offer the longest remission among all the current treatment options (for more information, please visit website www.enbrel.com and www.remicade.com).

How to keep psoriasis from affecting ones emotional well being?
Psoriasis is best faced with a measure of equanimity in that, when a patch is noted, it is no cause for fear, for treatment can rid you of it, and a cleared patch is no cause for celebration, as a new lesion can occur there or elsewhere someday. The focus is to keep Psoriasis from coming in the way of your routine, livelihood and quality of life, with the means available.

Is it true that alternative systems of medicine can cure psoriasis?
Many alternative systems of medicine have effective treatments for Psoriasis to the point of inducing remissions, but none can cure it as matters stand today, immaterial of what is promised. Quacks abound in the real world and on the net. Be wary of those who promise you what you wish to believe, and love to hear.