

Case Study and Patient Counseling for Elderly Patient on Psoriasis Vulgaris

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ABSTRACT

The origin is characterised by skin and nail spots. It is considered a serious skin condition that affects around 100 million people worldwide. In 2016-2017, around 2% of the global population and 0.44-2.8% of the Indian population were affected with psoriasis. The five most common kinds of psoriasis are plaque, guttate, inverted, pustular, and erythrodermic. Plaque psoriasis, also known as psoriasis vulgaris, is the most prevalent type of illness (about 90% of cases) and is characterised by red patches covered with white scales. A 75-year male case with raised lesions on both legs from 6 months with fever arrived at the hospital on 03-MAR-2022. He had a history of raised scaly lesions on both the legs, trunk and upper limbs for 6 months. Multiple hyperpigmented scaly plaques of varying sizes on a trunk, back, both upper limbs, and huge plaques on both the lower limbs. Due to psoriasis, young adults with relatively stable plaque psoriasis experience feelings of embarrassment, impairments in daily activities, deteriorating physical health and decreased work productivity. Female patients, those with a high BMI, and those with a longer duration of illness appeared to be more severely impaired. The observations suggest that the clinical patterns and pathogenesis of psoriasis in the elderly may differ from those in the middle-aged onset group. To fully understand psoriasis that occurs in this age group, additional epidemiological and genetic research is required.



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INTRODUCTION

Origin that is characterised by skin and nail spots. It is considered a serious skin condition that affects around 100 million people worldwide [1]. In 2016-

2017, around 2% of the global population and 0.44-2.8% of the Indian population were affected with psoriasis. The five most common kinds of psoriasis are plaque, guttate, inverted, pustular, and erythrodermic. Plaque psoriasis, also known as psoriasis vulgaris, is the most prevalent type of illness (about 90% of cases) and is characterised by red patches covered with white scales [2]. Common areas affected by psoriasis vulgaris include the scalp, knees, elbows, hands, nails, and feet.

Psoriasis is a genetically predisposed autoimmune-inflammatory disease that is mediated by T-helper cells. Polymorphism, also known as variations in the DNA sequence of a gene, can be caused by external factors such as chemicals, viruses, and radiation. In psoriasis patients, polymorphisms in the genes for Th2 cytokine/regulatory T-cell (interleukin-

10/IL10), Th1/Th17 cytokine (IL-12B and IL-23R), and tumour necrosis factor-alpha (TNFAIP3; TNIP1) confers greater risk for cardiovascular disease and other conditions [3, 4].

Polymorphism in the Th1 proinflammatory cytokine gene IL-2 [-330 (G/T)] induced by a single nucleotide change has been shown to be associated with increased illness severity in the Indian population. On the other hand, a Th-2 cytokine/regulatory T-cell (IL-4) gene polymorphism has been proven to be protective against psoriasis. Psoriasis is caused by an increase in the levels of inflammatory cytokines, which is also linked to an increased risk of psoriatic arthritis, lymphomas, cardiovascular risk, Crohn's disease, and depression [5, 6]. There is no permanent cure for psoriasis; however, steroid creams, vitamin D3 cream, ultraviolet radiation, and immune-suppressing drugs (methotrexate) have been widely used with some success to reduce the symptoms [7].

Mesenchymal stem cells (MSCs) are multipotent adult stem cells that can multiply for an extended period of time while preserving their undifferentiated state. The resulting daughter cells are capable of differentiating into numerous types of host tissue cells, so aiding in tissue healing. Due to their tissue regeneration and host immunomodulatory characteristics, MSCs have the potential to function as a formidable tool in cell-based therapy. Numerous scientists and doctors have investigated the processes underlying MSCs' curative and tissue regeneration functions due to the functions they demonstrate [8, 9].

Very few publications have reported that stromal vascular fraction (SVF)/MSC therapy is beneficial in treating psoriasis by modulating the immune system. It has been shown that mesenchymal stem cells generated from human umbilical cord blood (hUCB-MSCs) alleviate psoriasis-like skin inflammation in mice and have regulatory effects on immune cells, including CD4+ T cells and dendritic cells. The first case study, including intravenous infusion of SVF into a psoriasis patient, revealed a considerable reduction in symptoms, as well as a noticeable improvement in skin look, psoriasis area, and PASI score reduction (from 50.4 to 0.3).

Infusion of MSC obtained from the umbilical cord (UC-MSC) successfully reduced psoriasis in human subjects. It was hypothesised that the migration of MSCs into skin lesions and their immunomodulatory, anti-autoimmune, and paracrine effects were the primary causes of the ameliorative effects. Other recent preclinical research has demonstrated that stem cell-derived conditioned media (CM) promotes

psoriasis-like wound healing, making CM a viable option for many cell-based therapies [10-12].

Paracrine substances, such as growth factors, chemokines, and cytokines, produced by stem cells play a significant role in wound healing, and these molecules are found in CM or wasted media recovered from cultivated cells.

CASE PRESENTATION

Patient

A 75-year male case of raised lesions on both legs from 6 months with fever arrived at the hospital on 03-MAR-2022. He had a history of raised scaly lesions on both the legs, trunk and upper limbs from 6 months.

1. H/O of fever which is high grade with chills and decreased with medication.
2. H/O swelling on both the legs decreased in the morning.
3. Scaly lesions on both the legs from 6 months.
4. Similar history from past 20 years.
5. 1 episode since one year.
6. H/O summer exacerbation.

MEDICATION HISTORY

Consultation with a dermatologist, followed by oral, topical medications given – improved completely with treatment.

Past Medical History

1. No H/O photosensitivity, joint pain.
2. No H/O dental caries/foci of infection.
3. Not a known case of Diabetes mellitus, hypertension, tuberculosis, Asthma and epilepsy.
4. No other significant history.

Personal History & Habitat

1. Normal bowel and bladder habits.
2. Normal sleep and appetite.
3. H/O constipation for the past 2 days.
4. Not an alcoholic.
5. H/O smoking for past 30 years occasionally.

Family History

- The patient had no significant family history with respect to diagnosis.

General Examination

Temperature : Afebrile

Pulse Rate : 88/min

Respiratory Rate : 18/min

Blood Pressure : 120/80 mm Hg

Physical examination

No pallor, icterus, cyanosis, lymphadenopathy

Patient is conscious and oriented.

Systems Examination

RS : NVBS+

CVS : S₁S₂ +

CNS : NFND

GU & GI : soft, BS +

PR & PELVIC: NAD, Pedal edema +

DERMATOLOGICAL EXAMINATION



Figure 1: Physical examination

Scalp: Senile canitis

Face: Normal

Multiple hyperpigmented scaly plaques of varying sizes on a trunk, back, both upper limbs, and huge plaques on both the lower limbs.

Palm and Soles: Normal

Patient Counseling

This disorder is a chronic, recurrent condition whose severity ranges from minor, localised patches

to total body coverage. Psoriatic nail dystrophy frequently affects fingernails and toenails and can be viewed as an isolated symptom. The inflammation of the joints caused by psoriasis is known as psoriatic arthritis. Ten to fifteen percent of psoriasis patients suffer from Psoriatic arthritis.

Pustular psoriasis manifests as elevated bumps containing non-infectious pus (pustules). Under and around the pustules, the skin is red and tender. Pustular psoriasis can be localised to the hands and feet (palmoplantar pustulosis), or it can be widespread and affect any part of the body at random.

Drug counseling

1. Inj. Ciprofloxacin: is an antibiotic. It is used in the treatment of infections. It should be taken once in the morning and once at night.
2. Inj. Metronidazole: It is an antiprotozoal or antibacterial agent. It should be taken twice daily.
3. Inj. Amoxicillin: It is an anti-microbial agent. It should be taken twice daily.
4. T. Fexofenidine: It is an alkylamine derivative with H1 receptor antagonistic properties. It is also a sedative agent. Work needing mental stability should not be done after taking medicine. It should be taken once at night.
5. T. Udiliv: It is a liver enzyme. It should be taken once daily.
6. Inj. Dexamethasone: it is a glucocorticoid. It has anti-inflammatory action. It should be taken once daily.

Regarding Therapeutic Lifestyle Modification

1. Do not take any OTC drugs without consulting your doctor.
2. Adhere strictly to your drug therapy.
3. If you experience any sort of side effects or hypersensitivity reactions, contact your doctor immediately.
4. Add more fresh fruits and vegetables to your diet.
5. Do not consume alcohol or smoke, as it increases the risk for you to develop cardiovascular complications.
6. Perform regular moderate exercise like walking for 30 mins daily.

Table 1: Laboratory Investigations

Parameter	Value	Normal Range
PCV	36.8 % (↓)	41-59 %
DC	P72.2 L25.7 E0.8 M1.2 B0.1	P40-70L20-40E1-6M2-10B<1
FBS	141 mg/dl (↑)	70 – 110 mg/dl
PPBS	202 mg/dl (↑)	80 – 140 mg/dl
SGOT (AST)	76U/L (↑)	15-37 U/L

Table 2: Medications prescribed

S.No.	Drug	Dose	ROA	Frequency	Duration
1.	Inj. Ciprofloxacin	200 mg	IV	BD	7 days
2.	Inj. Metronidazole	500 mg	IV	BD	7 days
3.	Inj. Amoxicillin	600 mg	IV	BD	7 days
4.	T. Fexofenadine	4 mg	P/O	HS	7 days
5.	T. Udiliv (liver enzyme)	1 tab	P/O	OD	7 days
6.	T. B.complex, ferrous sulphate	1 tab	P/O	OD	7 days
7.	T. Paracetamol	500 mg	P/O	STAT	7 days
8.	Fluconazole cream		L/A	TDS	7 days
9.	Inj. Dexamethasone	1cc	IV	OD	7 days

7. Go for regular health checkups.
8. Avoid saturated fats, cholesterol and salt in your diet.

CONCLUSION

Due to psoriasis, young adults with relatively stable plaque psoriasis experience feelings of embarrassment, impairments in daily activities, deteriorating physical health and decreased work productivity. Female patients, those with a high BMI, and those with a longer duration of illness appeared to be more severely impaired. The observations suggest that the clinical patterns and pathogenesis of psoriasis in the elderly may differ from those in the middle-aged onset group. To fully understand psoriasis that occurs in this age group, additional epidemiological and genetic research is required.

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Conflict of interest

The authors declare that they have no conflict of interest.

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