

# Vitiligo, Rheumatoid Arthritis and Pustular Psoriasis: A Rare Presentation

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## ARTICLE INFO

### Article history:

Received: 27 September 2017

Accepted: 18 May 2018

Published: 21 May 2018

### Keywords:

Psoriatic arthritis;

Autoimmune diseases;

Pustular Psoriasis ;

Distal Interphalangeal

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Clin Dermatol Res Ther

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**Citation this article:** Babu A. Vitiligo, Rheumatoid Arthritis and Pustular Psoriasis: A Rare Presentation. Clin Dermatol Res Ther. 2018; 2(1):116.

## ABSTRACT

A 44 year male presented with joint pains, hypopigmented macules over extremities and trunk, finger and toe deformities and pus filled lesions over macules. A detailed clinical and laboratory examination revealed a combination of rheumatoid arthritis, vitiligo and pustular psoriasis. Multiple autoimmune syndrome described as the occurrence three or more autoimmune conditions simultaneously or sequentially. The rarity of the combination of vitiligo, rheumatoid arthritis and pustular psoriasis in a single individual is the reason for reporting this case. This case highlights the importance of screening for other autoimmune conditions and to keep a vigilant eye for various combinations of multiple autoimmune syndromes.

### History

Presenting our patient a male, 44years of age from Moodbidiri, Mangalore who was working as hotel manager in Pune till 8 months ago. His chief complaints include :

Joint pains since 20 years

White patches over hands and feet since 10 years

Finger and toe deformities since 8 months

Nail changes since 7 months

Pus filled lesions over white patches since 4 months

The complaints of joint pains since 20 years was associated with early morning stiffness and swelling at knee, ankle at first then progressing to involve the wrist, PIP, shoulder, elbow and small joints of feet, initially sparing the DIP now involving it. The pain was reported to be worse in mornings and relieved with medications. In 2012, he gives history of one admission for joint pains, fever, epigastric pain, he was evaluated and found to have ANA +, urine protein++, erosions over stomach mucosa. He was then put on steroids, methotrexate (2.5-7.5mg), intraarticular triamcinolone injections, following which he had episodic symptoms which progressively worsened from december 2013. He developed asymptomatic white patches since ten years which started on feet, then involved fingers , scalp, perioral area, penis and groin, he was receiving topical treatment for this and the lesions have been stable since the last two years.

Since the past eight months he complains of stiffness of fingers, deformities, splitting of nail from bed, loss of nail and yellow thickening below nail which

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**Figure 1:** Boutonniere deformity indicative of rheumatoid arthritis.



**Figure 2:** Pustules over depigmented lesions.



**Figure 3:** Nails: onycholysis, onychoptosis, subungual hyperkeratosis.

has been treated with terbinafine. Gives history of Fluid and pus filled lesions over and around nails and white patches for the past 4 months.

### Examination

Clinical examination reveals mild pallor, tender joints, boutonniere (Figure 1) and swan neck deformities, joint effusion in both knees and restricted range of movements at joints. Cutaneous examination reveals multiple depigmented large macules over lip, penis, groin, extremities, trunk and forehead, multiple fluid and pus filled lesions in axilla, feet, hands, toes (Figure 2). The nails appear dystrophic, with onycholysis and splitting of nail from nail bed, some fingers show loss of nail and subungual hyperkeratosis (Figure 3). Sparing of left index finger nail is seen. Few papules visible over scalp. Palms and soles are spared except few fluid filled lesions. The mucosa appeared normal.

### Laboratory Findings

The patient was investigated and laboratory findings revealed a Haemoglobin of 9.5, a total count of 14100, raised ESR of 136 and platelet counts of 604000. He had an INR of 1.4 and elevated CRP at 236. His urine was 3+ for albumin and peripheral smear done showed normocytic normochromic anaemia with neutrophilic leucocytosis. A more detailed evaluation included CCP which was found to be 2.5, mildly elevated Rheumatoid factor of 16.5 (normal:0-14) and ASO titre of 213 (normal:0-200). TSH was found to be normal. Nail clipping for KOH was found to be negative for fungus. Skin biopsy done showed features of pustular psoriasis and vitiligo. Synovial fluid analysis was negative for AFB and showed the presence of Gram positive cocci.

### Discussion

He was treated with hydroxychloroquine, methotrexate, topical antibiotics and oral anti histamines and showed signs of improvement. Rheumatoid arthritis is a chronic disease of autoimmune origin with features of joint swelling, joint tenderness and chronicity leads to destruction of synovial joints and severe disability. The etiology was found to be inflammatory in origin [1].

Vitiligo is a depigmentation disorder of the skin, hair and mucosal surfaces. There is found to be selective destruction of functioning melanocytes. Several etiological factors have been suggested for vitiligo [2], for which the most satisfactory evidence involves a combination of environmental, genetic and immunological factors which contributes to a process of autoimmune melanocyte destruction. Patients with genetic variants and their close relatives have found to have a more frequent occurrence of other autoimmune diseases [3]. The association of vitiligo and rheumatoid arthritis has been reported previously [4].

Psoriatic Arthritis (PsA) is a chronic inflammatory arthropathy which can affect the peripheral joints, spine, and entheses. It is distinguished from rheumatoid arthritis by infrequent seropositivity for rheumatoid factor and anti-citrullinated peptide antibodies, the involvement of the Distal Interphalangeal (DIP) joints, an asymmetric distribution of the inflamed joints, the presence of dactylitis, enthesitis, sacroiliitis, psoriasis and distinct radiological changes [5]. Pustular Psoriasis (PP) is a variant of psoriasis distinguished clinically by a generalized or localized presence of pustules on erythematous skin and histopathologically by the predominance of intraepidermal collections of neutrophils. The occurrence along with vitiligo and rheumatoid arthritis has not been reported [6]. Humbert and Dupond classified multiple autoimmune syndromes as type I which comprises myasthenia, thymoma, polymyositis and giant cell myocarditis, type II which includes Sjögren's syndrome, rheumatoid arthritis, primary biliary cirrhosis, scleroderma, autoimmune thyroid disorders and type III with 10 autoimmune diseases (autoimmune thyroid disease, myasthenia and/or thymoma, Sjögren's syndrome, pernicious anaemia, idiopathic thrombocytopenic purpura, Addison's disease, insulin-dependent diabetes, vitiligo, autoimmune haemolytic anaemia, systemic lupus erythematosus) with a genetic predisposition of HLA B8 and/or DR3 or DR5 7. The patient discussed here presents with two out of three conditions in multiple autoimmune syndrome and could thus be heading toward any of the above mentioned autoimmune conditions to complete the triad

and it is important that we remain vigilant and screen for the same.

### Conclusion

The combined presentation of rheumatoid arthritis, vitiligo and pustular psoriasis could form a new triad under the multiple autoimmune syndromes that include atleast 3 autoimmune disorders which evolve from a papulosquamous, pigmentary, bullous, or collagen vascular disorder. The treatment should target to achieve a multidisciplinary approach to achieve stabilization of the disease process and regular follow up. This association makes us aware that the presence of an autoimmune condition must make us vigilant to look for other conditions with a similar etiology.

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