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A Rare Case of Reiter's Disease

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Abstract: Reiter's disease is a genetically orchestrated immune response focussed on skin and joints, commonly presenting with a triad of conjuctivitis, acute non supurative seronegative arthritis and urethritis. A 24 year old female presented with dark colored raised oozy lesions around face, umbilicus, and thighs, upper and lower extremities since 1 month not responding to antibiotics. She had itching all over body, foul smelling vaginal discharge, knee joint pain, pedal edema with history of diarrhea 1 month back. Skin examination showed multiple well defined scaly plaques with few horny nodules over trunk, upper and lower extremities, face and back and keratoderma blenorrhagica like lesions on palms and soles. Genital examination showed curdy white foul smelling discharge. Investigations revealed high ESR (60mm/hr), microcytic hypochromic anaemia, Rheumatoid factor-negative, Joint fluid showed 40% of polymorphs with 2500/cmm, elevated CRP. Cervical vaginal swab shows klebsiella. Skin biopsy shows epidermal hyperplasia with acanthosis and parakeratosis with suprapapillary thinning and infiltration of neutrophils. On the basis of clinical findings and investigations, diagnosis of Reiter's disease was made and Tab Doxycycline 100mg twice daily, Tab. Prednisolone 40 mg once daily and Tab methotrexate 7.5 mg to 10 mg in varying doses were started with considerable improvement .This case is presented due to rarity of the disease.
Keywords: Reiter's Disease, skin and joints.

INTRODUCTION

Reiter's disease (RD) is a genetically orchestrated immune response focused on the skin and joints in which a non supurative polyarthritis lasting for more than 1 month follows closely after a lower urogenital or enteric infection with certain microorganisms [1, 2].

Hans Reiter described Reiter's Disease consisting of the classic triad of severe polyarthritis, conjunctivitis and nongonococcal urethritis in a Prussian soldier with diarrhea, during the First World War in 1916 [3, 4]. Symptoms generally appear within 1–3 weeks but can range from 4–35 days from onset of initial episode of urethritis/ cervicitis or diarrhea5. Signs and symptoms usually remit within 6 months. However, a significant percentage of patients have recurrent episodes of arthritis (15–50%), and some patients develop chronic arthritis (15–30%)[5]. Cardiac signs such as aortic regurgitation caused by inflammation of aortic wall and valve are rare. Other rare manifestations are central or peripheral nervous system lesions and pleuropulmonary infiltrates [4, 6].

RS is triggered by bacterial infection that enters via mucosal surfaces usually, (but not always) associated with human leukocyte antigen (HLA)-B273,4,6. Nongonococcal venereal disease (most often *Chlamydia*) and infectious diarrhea usually precede RD. These include infections with: *Shigella flexneri*, Shigella dysenteriae, *Salmonella typhimurium*, *Salmonella enteritidis*, *Streptococcus viridans*, *Mycoplasma pneumonia*, *Cyclospora*, *Chlamydia trachoma is*, *Yersinia enterocolitica*, and *Yersinia pseudo tuberculosis. Campylobacter jejuni* [3, 4, 6]. Others include *Chlamydia pneumoniae* and *Urea plasma urealiticum* [3, 4, 6].

The syndrome was the first rheumatologic disease noted in association with Human Immunodeficiency Virus[4]. RS is most common in individuals aged between 20–40 years; and it is rarely seen in children and elderly3,4,7. The male-to-female post venereal ratio is 5–10:1, while the post-enteric ratio is 1:1. The exact incidence is not known. The case is being reported for the rarity of occurrence in India and Vidarbha region

CASE REPORT

A 24 years old female presented with complaints of dark colored raised oozy lesions around umbilicus, thighs, upper and lower extremities and face since 1 month not responding to antibacterial therapy which was associated with itching all over the body,

foul smelling vaginal discharge, pain in knee joints and pedal edema with history of diarrhoea 1 month back. There was associated discharging of both eyes with redness. She had not been transfused with blood in the past and there was no history of multiple sexual partners.

On physical examination, the patient had pallor, was a febrile to touch and hemodynamically stable. She had tenderness over right knee and right ankle. Other joints were normal. Other systemic examinations were normal. Cardiac auscultation was normal. Skin examination showed multiple well defined scaly plaques with few horny nodules over trunk, upper and lower extremities, face and back, and KERATODERMA BLENORRHAGICA like lesions on palms and soles. Nail examination showed onycholysis, ridging and hyperkeratosis Genital examination showed curdy white foul smelling discharge.

Laboratory Investigations revealed raised ESR (60 mm/hour), low hemoglobin –(8mg/dL, microcytic normochromic anaemia), Elevated CRP (68.79mg/liter), ASO titre was 200 IU/ml, Joint fluid showed 40% polymorphs with 2500/cu. mm. of total cell count. X-Ray revealed haziness in Sacroiliac Joint. Vaginal swab showed klebsiella. Rheumatoid factor and retroviral screening (HIV 1 and 2) were negative.

Skin Biopsy showed epidermal hyperplasia with acanthosis and parakeratosis with suprapapillary thinning and neutrophilic infiltration.

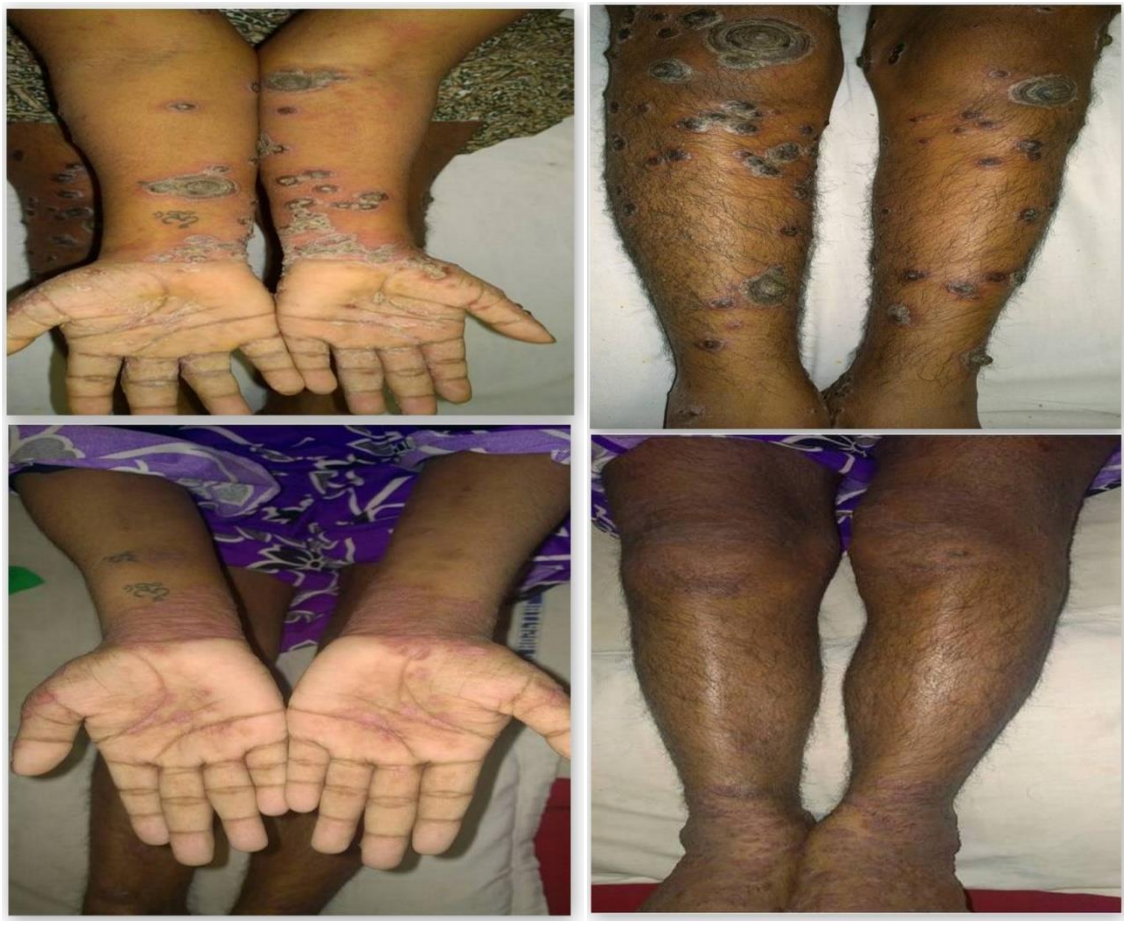

Fig-1: Clinical examination

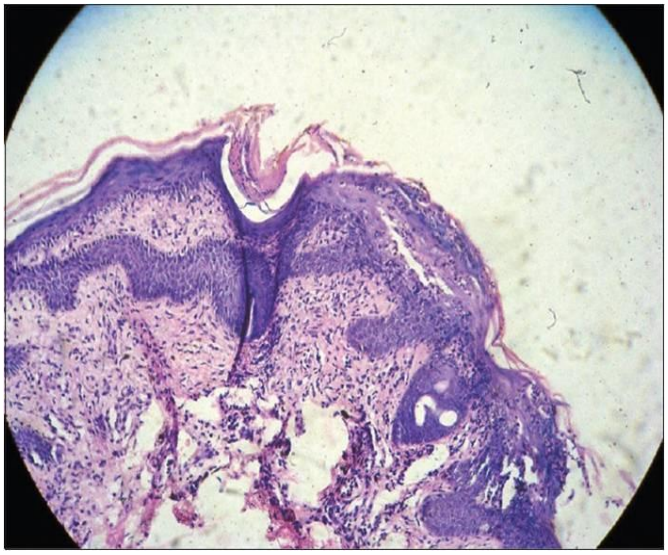

Fig-2: Skin Biopsy

The patient was placed on Tab Methotrexate 10mg once/week, Tab Sulfasalazine 1gm twice daily, Tab Doxycycline 100mg twice daily, Tab Folvite 5mg once daily, Tab Indocap-SR once daily, Topical Clobetasol Propionate 3% for local application twice daily.

DISCUSSION:

RD is reported most frequently among whites, occurrence appears to be related to HLA-B27 prevalence in the population. The age and gender of this patient are in keeping with the pattern among other population, that is, male preponderance and age range of between 20–40 years. The classic triad of RD was present in this patient. The arthritis was asymmetrical, polyarticular and mainly involved the weight bearing joints of the lower extremities. Furthermore, the conjunctivitis was transient and resolved without specific treatment. These are all typical findings in RD.

Features suggestive of cardiovascular, nervous and pulmonary involvement were not present in the patient. Such dermatologic manifestations of keratoderma, nail changes (onycholysis, ridging and hyperkeratosis) were present but superficial oral ulcers were absent in the case presented. These are known to be rare in RD [3, 4].

Generally, the diagnosis of RD is clinical; there is no definite diagnostic laboratory test or radiographic findings. Apart from the elevated erythrocyte sedimentation rate (ESR), CRP that suggested a bacterial infection, all the laboratory investigations were negative. Elevated ESR and acute phase reactants are usually found in cases of RD commonly. Anemia, commonly found in RD, was also present on this patient with haemoglobin 8 gm/dL. The negative report obtained for urine, stool and urethral swab cultures in the patient does not negate a diagnosis of RS. Vaginal swab cultures had a growth of the Klebsiella spp. which is associated with HLA-B27 related diseases8. There were no facilities to carry out antinuclear antibody screening and HLA genotype of the patient. Immunohistochemistry, polymerase chain reaction and molecular hybridization may be useful in further assessment [3, 4].

The patient was managed with methotrexate, doxycycline, sulfasalazine and topical clobetasol propionate. These are the recommended medications in the management of RD 3,4. It is seen that methotrexate is beneficial in treating resistant Reiters Disease that doesn't respond to conservative therapy especially the cutaneous manifestations. Other drugs that may be used are Tetracycline, Azathioprine, Cyclosporine and intra-articular steroid injection [4, 5, 9]. Recently, biological agents that block tumor necrosis factor α such as infliximab and etanercept have been reported [10, 11, 12].

Long term follow - up studies suggest that some joint symptoms persist in 30 to 60% of patients with RD4. Recurrences of the acute syndrome are common, and as many as 25% cases evolve into chronic illness leading to disability which may make the patient unable to work or forced to change occupation [4, 6, 9].

CONCLUSION:

It is unique in the case that etiologic agents are known. Although Reiter's Disease is self limited in weeks to months, as many as 30-50% of patients will develop chronic disease that often waxes and wanes. Since it is an autoimmune disorder and hence patient responds well to methotrexate which is an non-steroidal immunosuppressive agent.

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