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REITER'S SYNDROME IN AN ADOLESCENT MALE: A THERAPEUTIC CHALLENGE

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ABSTRACT

Reiter's syndrome is a spondyloarthropathy which is characterized by the classic triad of urethritis, arthritis, and conjunctivitis, usually following a genitourinary or gastrointestinal infection. Also known as Fiessinger-Leroy disease, this syndrome generally affects young individuals between 20-40 yrs of age and the typical triad is usually not seen. Here in, we report a case of a 19 yr old male who presented with fever, arthritis, whitish urethral discharge followed by eruption of generalised red skin lesions. He was managed with injectable corticosteroids, methotrexate, sulphasalazine, hydroxychloroquine, doxycycline, NSAIDS and other supportive treatment.

KEYWORDS: Reiter's syndrome, Reactive arthritis, Spondyloarthropathy.

INTRODUCTION

Reiter's syndrome (RS) was first described by Hans Reiter in 1916 in a young soldier with conjunctivitis, urethritis, and arthritis, following an episode of dysentery. RS is classified into postdysenteric and post venereal RS, according to the preceding infection, although it can also be acquired after respiratory infections, urinary tract infections, and Bacilli Calmette–Guerin treatment for bladder carcinoma (1-2). The triggering agents are Chlamydia trachomatis,, Salmonella spp, Shigella flexneri enterocolitica, Campylobacter spp, and other organisms including the spirochete Borrelia burgdorferi. Human leukocyte antigen (HLA)-B27 positivity is seen in patients with RS (70-80%) (3). The classic triad of symptoms including the urethritis, conjunctivitis, arthritis is not present in majority of the patient (4). The single most important criteria of RS is arthritis which manifests commonly as oligoarticular arthritis affecting the joints of lower extremities (5-6). We hereby report an interesting case of an adolescent male who presented with typical cutaneous features of RS and arthritis following an episode of urethritis.

CASE REPORT

A nineteen-year-old male presented with fever and swelling of bilateral knee joints, wrist joints, and ankle joints for three months, itchy reddish, raised lesions all over body for 2 months, and whitish discharge from urethra for one month. There was no history suggestive of any eye involvement, no similar previous episodes, no history of diarrhea or passage of blood in stools. Past and family history was not significant. On general examination, his temperature was 39.1°C, blood.

pressure-120/70mm of Hg, pulse rate-72 bpm, respiratory rate-16/min. There was diffuse, tender swelling of the bilateral knee joints, ankle joints and smaller joints of hands and feet (Fig. 1). Tenderness was present over pelvis and back. Multiple, well-marginated, hyper pigmented to erythematous, coalescing, hyperkeratotic papules and plaques were present over the scalp, face, upper limb, axilla, trunk, back, genitals over an erythematous base (Fig. 2). Lesions were covered with yellowish crust at places. Palms and soles revealed multiple erythematous, hyperkeratotic papule and plaques of size ranging from 0.5-1cm (Fig. 3). Scalp also showed similar crusted lesions. Genital mucosa revealed erythematous circinate erosions with whitish discharge from the urethra (Fig. 4). Oral and conjunctival mucosae were normal. His ophthalmological examination was within normal limits. On investigations, complete blood count, liver function tests, kidney function tests were within normal limits except raised ESR (38mm). His rheumatoid factor was 12.8, and urethral cultures were positive for coagulase positive staphylococcus. HLA-B27 was positive and HIV (ELISA) test was negative. Histopathological examination of skin revealed hyperkeratosis, parakeratosis, acanthosis, regular epidermal hyperplasia and neutrophilic infiltration (Fig. 5). This confirmed our diagnosis of Reiter's syndrome. The patient was treated with intravenous

dexamethasone 4mg twice per day, methotrexate 20mg per week, sulphasalazine 2gm daily, hydroxychloroquine 300mg once a day, etoricoxib 60mg twice per day, doxycycline 100mg once a day along with other supportive treatment. The patient showed moderate improvement in arthritis and skin lesions after 1 month of treatment.

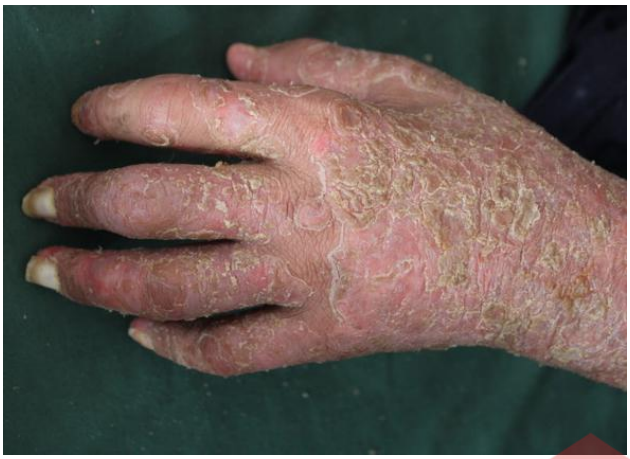

Fig 1: Swelling Present over the Wrist and Interphalangeal Joints

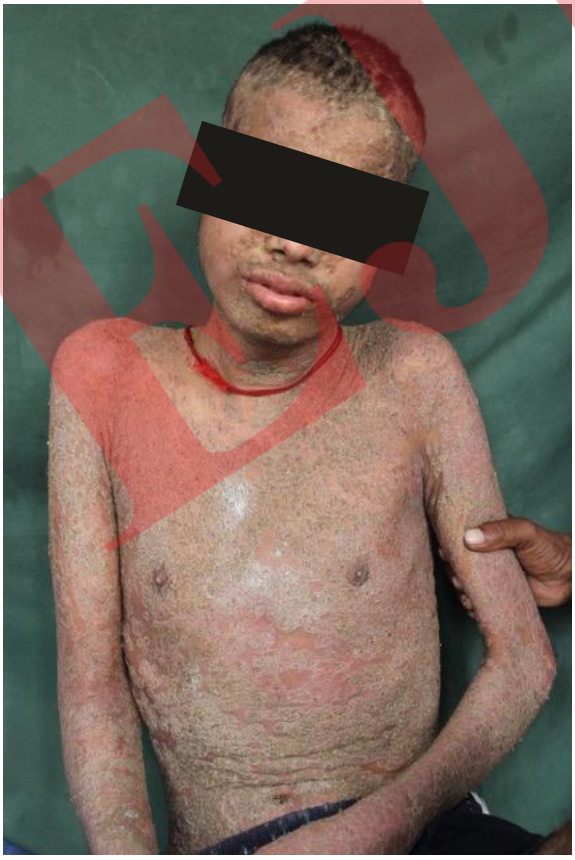

Fig 2: Multiple, Erythematous Papules and Plaques Present over Scalp, Face, UL, Trunk.

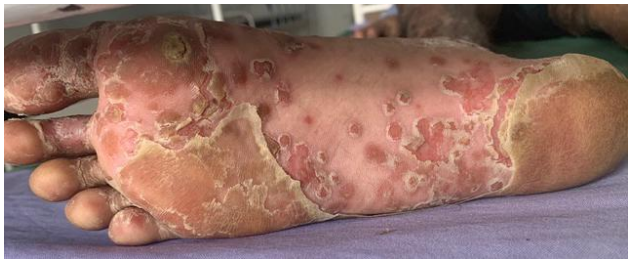

Fig 3: Erythematous Papules and Plaques with Collarette of Scaling

Fig 4: Circinate Erosions over Prepuce and Glans Penis

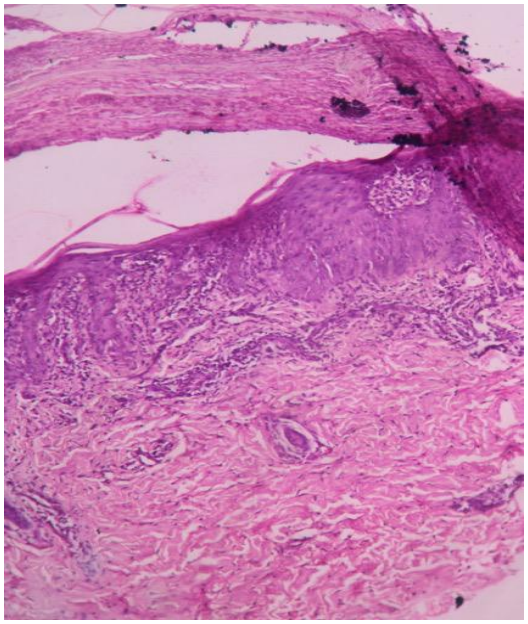

Fig 5: Skin Biopsy at 100X Microscopy Showed Hyperkeratosis, Parakeratosis, Regular Epidermal Hyperplasia, and Neutrophilic Infiltration (H&E Stain, 100X)

DISCUSSION

Reactive arthritis is characterized by the classic triad of urethritis, arthritis, and conjunctivitis following a genitourinary or gastrointestinal infection (7). Young children are more likely to acquire the post-dysenteric form, whereas in adolescents the post-urethritic form is the most common (8). The causative organisms include Shigella flexneri, Shigella dysenteriae, Salmonella typhimurium, Salmonella enteritidis, Streptococcus viridans, Mycoplasma pneumonia, Cyclospora, Chlamydia trachomatis, Yersinia enterocolitica, and Yersinia pseudotuberculosis. Others include Chlamydia pneumoniae, Ureaplasma urealiticum and Campylobacter jejuni. Conjunctivitis is the commonest manifestation in children. It is typically described as bilateral and mucopurulent, ranging from mild infection to severe inflammation. Non-specific urethritis presents with mild, painless, and non-purulent urethral discharge. Arthritis is usually the most prominent feature. The presence of peripheral arthritis involving lower limbs is significant. The most common joints involved are knee joints followed by ankles. The arthritis is generally self-limiting and lasts only a few months. However, it can persist in some cases for years. Mucocutaneous lesions occur frequently in RS and may confirm the diagnosis. Rarely, circinate balanitis and vulvitis are seen.

Keratoderma blennorrhagicum initially manifests as macules and vesicles which later develop hyperkeratotic papules and plaques with a pustular center. Oral erosions and ulcers may also develop in some patients. Diagnosis is predominantly clinical and can be confirmed by histopathology. Histopathological findings are similar to pustular psoriasis showing hyperkeratosis, parakeratosis, elongation and hypertrophy of the rete ridges, general epidermal hyperplasia, and extensive neutrophilic infiltration with formation of micro abscesses and spongiform pustules. Our patient, a nineteen-year-old male, presented with characteristic mucocutaneous manifestations of RS including hyperkeratotic plaques, circinate balanitis and keratoderma blenorrhagicum. Urethral culture revealed growth of coagulase positive staphylococcus aureus. RS triggered by staphylococcus aureus has only rarely been reported in literature (9-10). Our patient's HLA-B27 was positive which portends a poor prognosis of arthritis. Although, the diagnosis of RS is usually straightforward as in our case, but the main challenge lies in the treatment. We had to resort to an aggressive treatment including intravenous corticosteroids, NSAIDS, other Disease-modifying anti-rheumatic drugs (methotrexate, sulfasalazine, hydroxychloroquine), and long-term antibiotics (doxycycline) in order to control his crippling arthritis.

CONCLUSION

There has been a tremendous insight into the pathogenesis of RS, but the treatment has not yet been well studied. The best therapeutic approach in this condition is still not clear. The arthritis in such patients is usually disabling and significantly hampers the quality of life. Our report highlights the need for future clinical trials directed towards establishing proper guidelines for the management of this condition.

Conflicts of interest

There was no conflict of interest.

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