Clinical Presentation Of Reitet's Syndrome Among Iraqi Patients

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Summary:

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Background: *To shed some light on the clinical features of patients with Reiter's syndrome.*
Methods: *Reiter's syndrome in 50 patients (38 males and 12 females) was reported in a prospective study. All patients were subjected to detailed history, full clinical assessment and a slit lamp eye examination by an Ophthalmologist. A Dermatologist opinion was sought when needed and thorough laboratory and radiological investigations were made for all patients.*
Results: *Reiter's syndrome was post-dysnteric in 44 (88%) of patients and post-venereal in 6 (12%) patients. Its clinical features are similar to other series. Arthritis was noted in all patients, diarrhea in 44 (88%), eye lesions in 40 (80%) and mucocutaneous lesions in 37 (74%) patients but significant differences were noted between our study and others with respect to sex ratio, lower back pain, urethritis, oral ulcer, circulate balanitis. Tissue typing for HLA-B27 was positive in 72% of our patients.*
Conclusions: *Reiter's syndrome is not rare in Iraq as previously thought. Physicians need to be more aware of its existence in young adult men who develop arthritis following dysentery.*

Introduction:

As long ago as 1507, Pierre van Forest described a patient who developed arthritis of knee in association with urclhritis (1). In 1916, Hans Reiter, a German military physician, described the disease a World War I in a soldier who, following a bout of bloody diarrhea, developed the clinical triad of non-gonococcal urethritis, conjunctivitis, and arthritis (2).

Reiter's syndrome is the classic triad of non-specific urethritis, conjunctivitis and reactive arthritis that follow bacterial dysentery mainly salmonella, shigella, campylobacter or yersinia or sexually acquired infection with Chlamydia(3) Reiter's syndrome could be presented with complete or incomplete forms(4) More recently, doctors have recognized a fourth major feature: ulceration of the skin and mouth (5).

The direct cause of Reiter's syndrome is not known, however, both genetic and environmental factors are involved (5) The majority of affected individuals, usually young white men and about 65%-75% of the patients with Reiter's syndrome were positive for the histocompatability antigen HLA-B27 (6). We aimed to shed some light on the clinical features of patients with Reiter's syndrome.

Patients and Methods:

All patients with Reiter's syndrome attended the Rheumatology Unit, Baghdad Teaching Hospital between December 2003 and June 2004 were studied. Those fulfilled the European Spondyloarthropathy Study Group preliminary criteria for the classification of Reiter's syndrome as an episode of diarrhoea, non-gonococcal urethritis or cervicitis occurring within one month before arthritis were included in this prospective cross sectional study (11). All patients were subjected to detailed history, full clinical assessment and a slit-lamp eye examination by an Ophthalmologist. A Dermatologist opinion was sought when needed and thorough investigation was made for all patients that included: complete blood picture, sedimentation rate, general urine and stool examination, urine and stool culture, rheumatoid factor, and tissue typing (which was done for 46 patients), X-ray of pelvis (PA view), dorsolumbar spine and both heels (lateral view) while anti-HIV test was not done for any of our patients due to limitation of facilities. All investigations were performed using standard methods. Data were analyzed statistically using z-test (test of proportion).

Results:

Fifty patients who fulfilled the criteria of Reiter's syndrome were studied. There were 38 male and 12 female patients, giving a M: F ratio of 3.1:1.

The age of patients ranged from 6-49 years as shown in Figure (1).

The mean age at time of diagnosis was 22.5 years. The social status was low-income class in 25, middle-income class in 17, and high income class in 8 patients. The incidence of Reiter's syndrome does not seem to be affected by the social status.

There were 18 students, 11 civil servants, 11 laborers, 8 housewives, and 12 patients were doing

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various temporary jobs.

Three of our patients were Kurdish and 4 were Turkuman and the remaining were Arabs.

Post-dysenteric Reiter's syndrome was reported in forty four (88%) and post-venereal in the other six (12%) patients.

The clinical manifestations in 50 patients with Reiter's syndrome are summarize in Table (1). Musculoskeletal features were the commonest manifestation and they were found in all patients (100%) in the form of asymmetrical arthritis and most frequently involved the lower extremity joints, particularly the knees, ankles and feet joints.

The joints involved during the course of Reiter's syndrome were illustrated in Figure (2).

It was found that 23 (46%) had coincident urethritis mentioned as burning micturition in post-dysenteric Reiter's syndrome.

The frequency of eye and mucocutaneous manifestations in our study compared to previous series were illustrated in Table (2).

There were no heart, renal or nervous system involvement and no thrombophlebitis, purpura or livedoreticularis were reported.

All patients were seronegative, 36 patients (72%) were HLA-B27 positive (post-dysenteric (68.2%) and in post-venereal (66.6%) and family history for seronegative spondyloarthropathies was reported in 9 patients (18%).

ESR (westergren) was elevated in 30 patients (60%) and WBC was above 10,000 cell/cmm in 31 patients (62%).

General urine and stool examination and cultures were negative in all patients.

Radiological evidence of sacroilitis was reported in 10 patients (20%) and it was unilateral in 6 of them (12%). Unilateral syndesmophytes in the spine was seen in 3 patients (6%) with chronic Reiter's syndrome.

Fluffy calcaneal spur was found in 12 patients (24%); in 5 of them (10%) it was bilateral.

Table (1): Clinical manifestations in 50 patients with Reiter's syndrome

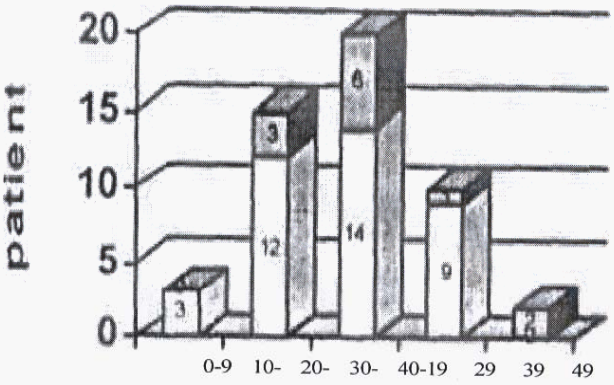
Manifestation		
Arthritis	**50**	**(100)**
Low back pain	**29**	**(58)**
Morning stillness	**40**	**(80)**
Diarrhea	**44**	**(88)**
Urethritis	**6**	**(12)**
Coincident urethritis	**23**	**(46)**
Conjunctivitis and episcleritis	**40**	**(80)**
Iritis	**6**	**(12)**
Oral ulceration	**28**	**(56)**
Nail changes	**4**	**(8)**
Keratoderma blenorrhagica	**4**	**(8)**
Balanitis circinata	**1**	**(2)**
Achiles tendonitis	**16**	**(32)**
Plantar fascitis	**14**	**(28)**
Sacroilitis	**15**	**(30)**

Table (2): Frequency of eye and mucocutaneous manifestations compaired with previous series.

Authors	No. of patients	Eye lesion %	Oral ulcer %	Balanitis circinate %	Keratoderma blenorrhgicum %
Present study (2004)	50	80	56	2	8
AL-arfaj[12] (2001)	34	38*			
ALRawi[13] (1996)	30	86.7[N.]	26.7*	3.3[N.S.]	16.7[N.S.]
Arnett[14]),(1979)	69	31*	14*	26**	23[N.S.]

N.S.: Not significant
* : *significant PO.005*
** : *highly significant P< 0.01*

□ *Males* □ *Females*



Age group (years) **Figure (I) : Age and sex distribution of 50 patients at lime of diagnosis**

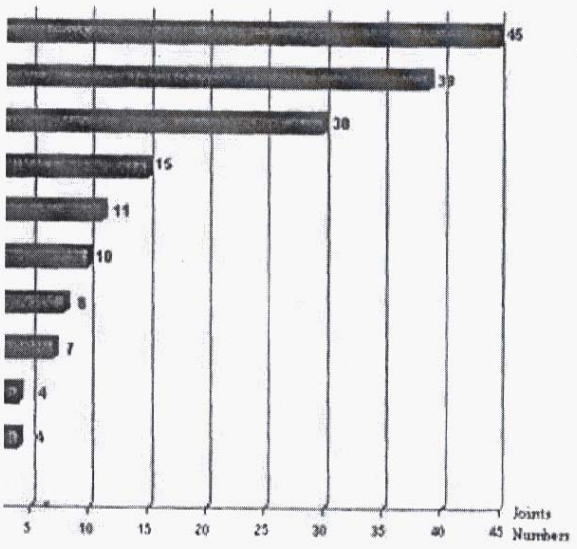


Figure (2): Frequency of joint involvement in 50 patients with Reiter's syndrome

Discussion:

Reiter's syndrome is obviously not as rare in Iraq as was previously thought. In our study, it was seen more commonly in males than females with a male to female ratio of 3.1:1, which differs from other series that showed a ratio of 9:1 (2).

Most of our patients (90%) were seen between the age of 11 to 45 years (during period of sexuality, physical and reproductive activity).

Though it is a disease of youth but it may also occur in children as in our study, where the youngest age at which it occurred was 6 years, whilst in other series it was reported in as young as 18 months (1). The disease was reported in one of our patients (2%) above the age of 45 years compared to 3.2% in other series (1). The mean age in our study at time of diagnosis was 22.5 years while in other study it was 27 years (13).

Reiter's syndrome in our study was found as post-dysenteric in 44 (88%) while in UK and North America, most cases occur following extra-marital sexual intercourse whereas in other parts of Europe, dysentery more frequently preceded the clinical symptoms (1,3).

Arthritis was reported in all our patients (100%) compared to 88% of 68 patients in other study (14) ($p>0.05$).

The joints of the lower limb were commonly involved in our patients and other series (1, 13), while the joints of upper limb were involved in 26% of our patients compared to 9.3% in others (13). Back pain was reported in 58% of patients in our study compared to 38.2% of patients in other study (14) ($p>0.05$). Clinical evidence of sacroilitis was reported in 30% of our patients compared to 40% (13) and 15% (12) whilst clinical evidence of spondylitis was seen in 6% of our patients compared to 22.1 (14) ($p<0.05$).

Urethrilis was reported in 12% of our patients compared to 61 % of 18 patients with Reiter's syndrome in other study ($p<0.05$)

Ocular manifestations were reported in 80% of our patients compared to 86.7% (13) and 38%(12) in other series.

Oral ulcers were found in 56% in this study compared to 26.7% and 14% ($p<0.05$) (13,14).

Kcratoderma blenorrhagica was found in 8% of our patients compared to 16.7% and 23% in other series(13,14) (not significant). Circinale balanitis was reported less frequently 2% of our patients compared to 26% (14) ($p<0.01$) and 3.3% (not significant)(13). Positive family history was found in 18% in our study similar to other study (13). Heart involvement was not reported in our study, which differs from the finding in one report (1) of pericarditis in 7%. Central nervous system involvement was not found in our patients whilst it was found in 1% in other study (1).

Laboratoiy findings in our study do not differ from other series. Positive HLA-B27 was found in 72% in this study compared to 93.3% (13) in other series.

Radiological evidence of sacroilitis was found in 20% of our patients compared to 80% in other study (1). In conclusion, Reiter's syndrome is a disease which appears to be not rare in Iraq as previously thought and physicians need to be more aware of its existence in young adult male patients with arthritis following dysentery.

Its clinical manifestations are more or less similar to what was reported by other authors.

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