REITER'S SYNDROME WITH PERSISTENT CONJUNCTIVITIS
(Case report)

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Summary

Reiter's Syndrome (R.S.) consists of urethritis, conjunctivitis and arthritis with a wide variety of manifestations and sequelae. Urethritis and conjunctivitis may be so mild and of such short duration that they are forgotten by the patients. In this report we describe a case of R. S. with persistent conjunctivitis refractory to a short course of systemic corticosteroids as well as local steroid ointment.

Though Reiter's syndrome was described in 1916 by Feissinger and Leroy[1] in France and at the same time by Reiter[2] in Germany independently, it is commonly described as a syndrome under the latter's name. Few case reports from our country[3,4,5] are made though this condition is not uncommon. An excellent review of literature has been made by Anandam and Deshpande[3]. The syndrome consists of diarrhoea followed by urethritis, arthritis and conjunctivitis. These are usually followed by circinate balanitis, oral lesions and rupioid psoriasis (keratoderma blennorrhagica)[6], but varying manifestations of the syndrome as well as incomplete pictures have been recently described. Of the two kinds venereal and non-venereal (dysenteric type), the latter is more common in women and children whereas the venereal is more common in males.

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Incidence varies from place to place and about 3% of nonspecific urethritis (N.S.U.) and 0.8% of gonococcal urethritis are accepted by most authorities.[6] No definite aetiopathogenesis is made; Mycoplasma, Tric agent, rheumatic disease in relatives, antibodies to prostatic tissue, and recently HLA BW 27 are all incriminated[9]. HLA antigens are expected to solve the problem of pathogenesis of Reiter's syndrome and it is expected to help in the management of the cases[21].

A male presenting with the dysenteric type of onset with persistent conjunctivitis is described. He, however, had mild urethritis. The venereal form was ruled out only because of absence of a history of infective intercourse immediately preceding onset of the disease.

Case Report

A 25 year male hindu agricultural worker attended the Orthopaedic and Ophthalmic out-patient departments with pain and swelling of the left knee and ankle joints as well as bilateral conjunctivitis. He also complained of

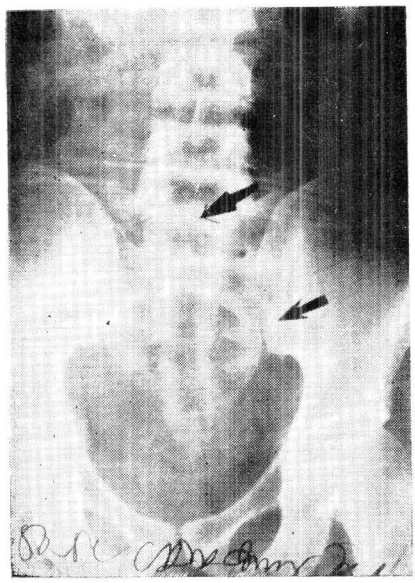

Fig. 1

mild to moderate fever during the evenings. He gave a history of dysentery for one month prior to onset of the above problems. As he was bound to have mild urethritis, he was referred to the S.T.D. department.

** The patient attended our department (S.T.D.) on 6-11-1978 and was admitted the same day with a provisional diagnosis of Reiter's syndrome and was investigated.

Patient who was married for 5 years had two children and undergone vasectomy 2 years before. He gave history of pre-marital contacts. There was no personal or family history suggestive of psoriasis or collagen diseases.

His wife was found not to suffer from venereal diseases.

On examination the patient was a moderately built individual. Eye lids were slightly oedematous. Both palpebral as well as bulbar conjunctivae were congested and showed muco-purulent discharge. Cornea of both eyes were hazy with superficial keratitis. Pupils measured 3 mm., were round and reactive. Lens was clear on both sides. There was no evidence of iritis. Vision was 6/30 (both eyes) and intraocular tension was normal. Left knee was tender and showed diffuse swelling with restriction of movements. Left ankle and sacro-iliac region were also tender. Soles showed pitted keratolysis. Palms, nails and hair were normal. Oral, genital and anal mucous membranes were normal. A scar on the shaft of the penis was seen. Rectal examination showed a slightly oedematous but not tender prostate. Prostatic massage elicited thin watery discharge. Cystoscopy was performed and the trigone was seen to be selectively and intensely congested. Prostatic urethra was also intensely congested. There was purulent discharge from the prostatic ductules on pressure over the prostate.

Systemic examination revealed no abnormality.

Treatment

The patient was given phenyl butazone 100 mgm t.d.s., dexamethasone

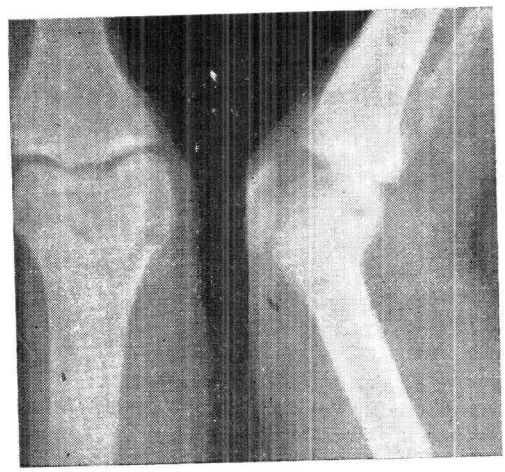

Fig. 2

(0.5 mgm) 2 mgm daily for four days which was gradually reduced over a period of 12 days and local steroid ointment for the eyes. At the time of discharge there was almost complete relief from the arthritis but the conjunctivitis persisted. Due to economical reasons patient requested discharge from the hospital. He has been requested to attend for follow-up.

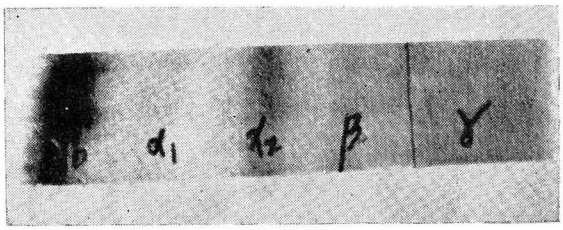

Fig. 3

Follow up

Patient reported for follow up on 12—12—78, 15 days after discharge from the hospital; he continued to have conjunctivitis, but of a milder degree. He discontinued the corticosteroids six days ago. He gave the history of applying some juice (extracted from leaves) four days ago. His general condition is good. He was advised not to apply any local remedy and to attend our follow up clinics regularly. Again he is put on corticosteroid, this time prednisolone 40 mgms initially to be tappered over a period of 2 weeks.

TABLE 1

Fraction	Normal values	Average of normals	Patient
Albumin	45 to 60%	52.5%	51%
Globulins:			
Alpha-1	2 to 6%	4%	4.5%
Alpha-2	5 to 11%	8%	13.5%
Beta	7 to 16%	11.5%	12.5%
Gamma	11 to 22%	16.5%	18.5%

Table showing serum Electrophoretic pattern of normals and that of the patient. Ivor Smith[10].

Investigations

1. Stool Examination showed no abnormality.
2. Urine Exam : 2 to 4 pus cells per H.P.F. and 1 to 3 Epithelial cells per H. P. F. were seen in the deposits.
3. Urine culture was reported as sterile.
4. Total W. B. C. : 7600 cells/m.l. blood. Polymorphs 51%; Lymphocytes 42%; Eosinophils 7%
5. Erythrocyte Sedimentation Rate : 18 m.m. at ½ Hr and 40 m.m. at 1 Hr.
6. Blood V. D. R. L. : Non reactive.
7. Total Serum Proteins : 6.7 grams%; Albumin 3.01 grams%; Globulin 3.69 grams %
8. Serum electrophoretic pattern showed an increase in alpha-2 globulin (table-1 & Photograph of E.P.P.).
9. Serum Uric acid : 2.9 mgm%
10. 'C' reactive proteins : Negative.
11. Latex fixation test : Negative.
12. Mantoux : Negative.
13. Smear made from the discharge from the eyes was gram's stained : It showed plenty of pus cells with few Epithelial cells. No organisms could be demonstrated.
14. Culture from the discharge from the eyes : Sterile.
15. E.C.G. : No T or S.T. wave changes. Within normal limits.
16. X-Ray Chest : NAD
17. X-Ray Knee (left) : Soft tissue swelling present. Joint space narrowed. Osteoporosis of the upper and medial end of the Tibia left & osteoporosis of the lower and medial end of Femur (left).

18. X-Ray Lt. Ankle Jt : Medial aspect of lower end of the Tibia shows rarefaction.

19. X-Ray Sacro-iliac Joint: Spina bifida of S1 seen. Left side sacro-iliac joint space widened with oval lakes.

20. L. E. Cell: Negative.

Discussion

In typical cases of Reiter's Syndrome (R.S.) urethritis, arthritis and conjunctivitis are manifested. R.S. is a disease of young adults and our case is aged 25 years. The incubation period is about 5-30 days. In this case dysentery of one month's duration was followed by development of the syndrome. In dysentric forms, the triad of symptoms appear almost simultaneously. Arthritis occurs in attacks and is followed by recovery in most cases, but in some it progresses to cause permanent damage to the affected joints[13,14]. In our case, also, the presentation was with swelling of the left knee which disappeared within a week of treatment. The duration of an attack of R. S. varies from three weeks to 5 years, and the interval between attacks from 3 weeks to 18 years. R. S. presents formidable diagnostic problems which unless appreciated may result in an under-estimate of its prevalence[20]. Usually cases of R.S. attend the crowded opthalmic and orthopaedic Out Patient Departments. Unless one is cautious it is easily missed. That may be one of the reasons for the low reporting from our part of the country. Our case was referred from Orthopaedic department. R. S. may be due to as yet an unidentified organism or to a specific type of host response to a variety of infectious agents[21]. We could not demonstrate any specific organisms in our case, either in the conjunctival discharge or from urine both by smear and culture techniques. The conjuctivitis may be so mild and evanescent as to be overlooked. It occurs in more than 50% of cases, tends to be bilateral and transient, lasts a few days, rarely has a purulent exudate or an associated lid oedema and resembles acute catarrhal conjunctivitis (pink eye)[24]. But in our case conjunctivitis with photophobia were the presenting symptoms. Eye lids were slightly oedematous and both palpebral as well as bulbar conjunctivae were congested and showed a mucopurulent discharge. Cornea was hazy. There was no evidence of iritis. Vision was 6/36 (both eyes) with normal tensions. R. S. selectively affects the anterior uvea and posterior uveitis is unknown. Treatment with corticosteroids locally and systemically, the arthritis cleared whereas the conjunctivitis persisted with only about 40-45% improvement, even after 3 weeks. Urethritis may be minimal, overlooked, or ignored by the patient[24]. In our case also urethritis was so mild and the history was elicited only after leading question. In this case urine examination revealed 2-4 pus cells/H.P.F. On cystoscopy the trigone was seen to be selectively and intensely congested. Prostatic urethra was congested, and there was purulent discharge from the ductules on pressure over the prostate. Urethral stricture and prostatic vesiculitis are complications of R. S.[11]. In this case also, the anterior urethritis was not seen as was the case with Anandam and Deshpande[3]. Skin lesions are more common in venereal than in the enteric cases[12]. In this patient there were no skin or mucosal lesions ; (but for the eye symptoms and signs). But it is too early to speculate on subsequent developments and the patient requires to be followed up.

The arthritis of R. S. resembles psoriatic arthritis clinically and shows absence of the Rheumatoid factor in most cases [14,15]. In this case there was no family history of psoriasis or Rheumatic diseases. Articular involvement is said to be asymmetric and polyarticular according to some[13], whereas others

hold the view that it is symmetrical. Our case presented with left sided knee, ankle and left sacro iliac joints involvement. Back pain (acute state) and asymmetrical lower limb soft tissue inflamation (chronic state) were prominent features of the disease. Although most patients had only arthritis, at the time of presentation, a significant number gave misleading information about sexual behaviour and venereal disease. Dactilitis with its distinctive appearance and frequency was the single most helpful finding[20]. Low back pain results from sacroilitis which occurs early and in some cases exhibits clinically and radiologically ankylosing spondylitis similar to that seen in ulcerative colitis, regional ilitis, Whipples disease and psoriasis[16]. Only two radiographic findings are suggestive of this disease, (1) periosteitis with periosteal new bone formation in the regions of involved joints especially in the inferior and posterior aspect of the os calcis producing a calcanean spur and (2) subchondral sclerosis, and irregular outlines of one or both sacro iliac joints[16]. Though in our case the calcanean spur is not seen, the sacro-iliac joint space is widened, with oval lakes. There is a dense sclerosis in the left sacro-iliac space (lake shown in figure 1). This rules out tuberculous arthritis[17]. Moreover the osteoporosis seen in the lower and medial end of the left femur and on the upper and medial end of tibia (left) is suggestive of Reiter's syndrome. The heredo-familial nature of the sero-negative spondylo-arthropathies together with the parallel inheritance of the B27 antigen, suggests that Ankylosing spondylitis and Reiter's syndrome share common pathogenetic factors. Although some patients present with only one or two of the classic manifestations (acute conjunctivitis, non specific urethritis and arthritis) of Reiter's syndrome, the diagnosis of the disease rarely presents much difficulty. The natural history of the fully developed syndrome is towards gradual and spontaneous resolution[18]. There is evidence of close co-relation between chronic sacro-ilitis and development of anterior uveitis[19]. Our case presented with both. We did not find any of the complications of Reiter's syndrome and ECG was within normal limits. It is well known that Aortic insufficiency develops late in the course of R. S. Some have followed up cases and report that murmur of Aortic insufficiency was first noticed on an average of 15 years after the clinical onset of R. S.[22]. The long latent period between the first episode and aortic incompetence seems to be characteristic. In those cases which have been fully documented this interval has varied between 4 and 31 years[23]. The following investigations suggested the diagnosis of R. S. in our patient.

1. The selective increase of alpha 2 globulin in the electrophoretic pattern (Table-1 and Figure-3).
2. Non reactive VDRL,
3. Negative LE cell phenomena,
4. Negative latex fixation test,
5. Negative mantoux test,
6. Normal uric acid level,
7. High ESR
8. No growth in urine culture
9. Positive X-Ray findings in the sacro-iliac and knee joints (Lt).

Treatment

Treatment of Reiter's syndrome is unsatisfactory. However the morbidity is reduced with salicylates, butazolidine derivatives and cortico-steroids. For the non specific urethritis, antibiotics like tetracyclines are administered.

Conclusion

This case is reported because to our knowledge persistent conjuctivitis has not been reported earlier in cases of R. S. With the dysenteric mode of onset, clinical manifestations of the

triad of symptoms viz., urethritis, conjunctivitis and arthritis, substantiated by the negative laboratory findings of non reactive blood VDRL, negative latex fixation test, negative L.E. cell phenomena, normal uric acid level, raised ESR, increased alpha 2 fraction of serum gumma globulin in Electrophotophoretic pattern and positive X-Ray findings of Sacro-ilitis, we label this as a case of R.S. with persistent conjunctivitis.

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