THE VALUE OF ANTI-HISTAMINE DRUGS IN THE TREATMENT OF INFECTIVE ARTHRITIS AND REITER’S DISEASE

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For the purpose of this article the term infective arthritis is used to describe the joint affection which occurs in some cases of gonorrhoea and non-specific urethritis.

It has been shown that arthritis can occur as a complication of non-gonococcal urethritis; also that when arthritis complicates a case of proven gonorrhoea, treatment with penicillin will cure the gonorrhoea, but, in the majority of cases, has no beneficial influence on the joint condition. In addition, it is impossible to differentiate by clinical, radiological and bacteriological methods this type of arthritis from that which occurs in Reiter’s disease (Levy, 1950).

Harkness has described the demonstration of inclusion bodies and “L” organisms in scrapings taken from the urethra and skin of cases of non-specific urethritis and Reiter’s disease. He considers that both the venereal and dysenteric syndromes of Reiter’s disease are due either to a virus or a pleuropneumonia-like organism.

Although the specific cause, if any, of infective arthritis has not been definitely established its treatment can usually be successfully undertaken by a variety of methods: fever (intravenous T.A.B. or hyperthermy), vaccines, physiotherapy are but a few. However, whatever method or methods of treatment are chosen, there always results a percentage of failures.

In a previous study of 100 cases of infective arthritis, it was noticed that many patients gave a history of having suffered from a previous attack of gonorrhoea or non-specific urethritis, and it was thought that allergy may play some part in the aetiology of the arthritis which accompanied the recent urethral infection.

Following on this conception of an allergic causation, it was decided to try the effect of anti-histamine drugs. Below are described 7 cases of infective arthritis which were treated with phenergan in the British Military Hospital, Singapore, from November 1949 to December 1950. Two tablets, each containing 0·025 gramme, were given three times daily until clinical improvement had occurred. This took approximately seven days of treatment.
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Case 1.—S.B.A. L. R.N.

History.—Exposure to infection 27.10.49. First noticed a urethral discharge 18.11.49 and soon after developed arthritis and conjunctivitis. He was treated at sea with 2·4 mega units of penicillin and 27 grammes of M&B 760. On admission to hospital 27.12.49 there was present a considerable effusion and tenderness of the right knee-joint. The right ankle-joint was painful and there was conjunctivitis of both eyes. A urethral smear showed pus cells only. The urine was hazy with pus. Culture of a mid-stream specimen grew *Staph. albus* only. The B.S.R. was 8 mm. drop in one hour on 27.12.49. A repeat B.S.R. on 30.12.49 showed 43 mm. drop in one hour.

Treatment.—Penicillin 50,000 units three hourly—2 mega units were given; streptomycin 3 grammes daily—total 24 grammes given.

On 17.1.50 there was no improvement, and aureomycin was given (8 grammes). After this, the urine was clearer, but the arthritis remained little changed. Generalized early keratoderma appeared on the soles of both the feet.

On 24.1.50 fever therapy was given (i.v. T.A.B.) on three occasions, also autohaemotherapy and a course of stilboestrol.

On 2.2.50 the B.S.R. was 62 mm. drop in one hour. Slight improvement and he was allowed to get up for a few hours daily.

On 6.3.50 he developed a painful spur on the left calcaneus. He looked ill and had lost a great deal of weight.

On 20.3.50 phenergan was started and he was given a total of 1·2 grammes. After this, the urine remained hazy. This pururia responded to irrigations and sulphadiazine.

On 31.3.50 he returned to duty.

On 17.4.50 seen again. No signs of arthritis.

On 22.5.50 very fit—playing football.

Case 2.—L.A.C. W.

History.—Several exposures with the same woman. A previous attack of urethritis 1943. Admitted 21.2.50 and diagnosed non-specific urethritis.

Treatment.—He was treated with penicillin 250,000 units and 25 grammes of sulphadiazine. There was no improvement so he was given and responded to 7·5 grammes of streptomycin. He returned to his unit 1.3.50.

On 4.3.50 he was readmitted with arthritis of both knee-joints. The B.S.R. was 35 mm. drop in one hour. There was a slight urethral discharge also present containing pus cells only. Phenergan was started on 15.3.50, and he was given 1·05 grammes. The joints improved, but his urine remained hazy. This pyuria responded to irrigations and sulphadiazine.

On 31.3.50 he returned to duty.

On 17.4.50 seen again. No signs of arthritis.

On 22.5.50 very fit—playing football.

Case 3.—Pte. L. A. T.

Exposure to infection 27.5.50—no previous history.

On 9.6.50 admitted to hospital with arthritis and gonococcal urethritis. B.S.R. 18 mm. drop in one hour.

Treatment.—On 9.6.50 200,000 units of penicillin were given. There was no improvement to joints.

On 16.6.50 phenergan started—2 tabs t.d.s., a total of 0·75 grammes was given. Response was satisfactory.

On 12.7.50 he was returned to duty.

On 16.10.50 report from B.M.H. Kinrara—arthritis—satisfactory.

On 6.1.51 seen again. Completely cured.
Case 4.—L.L. SP.F.

History.—No history of sexual exposure. Three weeks before onset of present arthritis had suffered from an attack of clinical dysentery which responded to sulphaguanidine. He later developed a mild conjunctivitis.

On 20.9.50 he was admitted to the medical ward with painful swelling of both knee-joints and right ankle-joint. Temperature 101°. The B.S.R. was 75 mm. drop in one hour. A diagnosis of rheumatic fever was made, and mist. soda salicyl. 15 grammes t.d.s. was given. No improvement was noticeable after ten days and he was referred.

On examination there was a polyarthritis involving both knee-joints and right ankle-joint, marked wasting and weakness of both quadriceps. A mild urethritis was present, a smear from which contained pus cells only. Urine contained pus and threads—cultures were sterile. Agglutination tests for the typhus and Brucella group were negative. The knee-joints were aspirated and turbid fluid containing many lymphocytes was removed.

A diagnosis of Reiter's disease (post-dysenteric syndrome) was made. 10·5 grammes of streptomycin and 42 tablets of phenergan were given. The patient was allowed up after seven days.

On 24.10.50 both knee-joints were normal. The B.S.R. was 4 mm. drop in one hour. There was slight stiffness of right mid-tarsal joints. The urine was clear. There was no urethral discharge.

On 26.10.50 sent for convalescence.

On 10.11.50 all joints were normal—patient feels well—returned to duty.

Case 5.—Spr. Abdul B. H.—I.

History.—Transferred from the surgical ward with arthritis of left knee-joint and left ankle-joint after having received penicillin injections. This was discontinued on 16.10.50 (1,100,000 units were given in all).

On 16.10.50 there was wasting of left quadriceps, synovitis of left knee-joint, arthritis of left ankle. The B.S.R. was 65 mm. drop in one hour. The urine contained pus cells.

Treatment.—Streptomycin 0·5 grammes t.d.s., phenergan tablets 2 t.d.s.

On 1.11.50 clinically no synovitis was present. Musculature was improving, and B.S.R. was 97 mm. drop in one hour. Continued physiotherapy, patient up.

On 8.11.50 patient still had pyuria and a mild urethritis, which resisted a course of sulphadiazine, and a second course of streptomycin. Pot. permang. irrigations eventually cleared this.

On 17.11.50 convalescence.

On 5.1.51 seen again. Has been doing full duty for four weeks. Is perfectly fit. B.S.R. was 13 mm. drop in one hour.

Case 6.—L.A. D.A. L.A.

History.—Sexual exposure in September 1950. There was a previous history of urethritis in March 1950.

On 26.10.50 he developed a urethral discharge. On 30.10.50 conjunctivitis and penile sores developed. This was treated with 30 grammes of M&B 760.

On 6.11.50 he was admitted to the B.M.H. Singapore. There was present—swelling of both knee-joints which were painful, pain and swelling of left mid-tarsal joint, balanitis circinata, keratoderma of soles of both feet, and also superficial ulcers of the oral mucous membrane. The B.S.R. was 46 mm. drop in one hour. The urine contained pus cells.

On 8.11.50 treatment consisting of streptomycin 0·5 grammes t.d.s., and phenergan tablets 2 t.d.s. was commenced. 7·5 grammes of streptomycin and 1·05 grammes of phenergan were given.

On 27.11.50 all conditions had improved. The urine still contained threads due to a prostatic focus. This responded to pot. permang. irrigations. The B.S.R. was 28 mm. drop in one hour.

On 12.12.50 he was sent for convalescence.
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On 29.12.50 looks and feels fit. All conditions now normal. The B.S.R. was 6 mm. drop in one hour. He was returned to full duty.

Case 7.—Cpl. McK——,

History.—Sexual exposure five weeks previously.
On 6.11.50 he reported with urethritis. The smear showed pus cells only. 200,000 units of penicillin were given.
On 7.11.50 the urine was hazy with pus. A urethral discharge was still present. An arthritis of his left knee-joint had developed. The B.S.R. was 12 mm. drop in one hour.
On 9.11.50 treatment consisting of: streptomycin 0.5 gramme t.d.s. and phenergan tablets 2 t.d.s. was commenced. 7.5 grammes of streptomycin and 36 tablets of phenergan were given.
On 14.11.50 the knee-joint was normal. The urine still contained pus due to prostatitis. This responded to a course of sulphadiazine and pot. permang. irrigations.
On 23.11.50 he returned to his unit on light duty.
On 8.12.50 the joint was normal and the urine was satisfactory.
On 8.1.51 seen again—perfectly normal.

Conclusions

7 cases are too few a number from which to draw any definite conclusion. The series was interesting from several points:

Case 1 had failed after several weeks of treatment including streptomycin, aureomycin, and penicillin.

Case 3 started as a non-specific urethritis which responded to 7.5 grammes of streptomycin. The patient later relapsed with arthritis as a complication.

Case 4 appears to be a true non-sexual post-dysenteric arthritis (Reiter’s syndrome).

The patients were taken in sequence as they arrived in hospital and no failures have yet been encountered. An important point lies in the short duration of time necessary for recovery. In our previous study with hyperthermy and other methods of treatment this type of arthritis often required several weeks or months before recovery was made.

No toxic manifestations were noticed while the patients were receiving phenergan.

Best results are obtained when a course of at least 7.5 grammes of streptomycin is given with the phenergan. Previous study has shown that infective arthritis is as closely associated with non-specific urethritis as it is with gonorrhæa, and in our experience the above dosage of streptomycin will cure both urethral conditions.

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References