

SPECTINOMYCIN DIHYDROCHLORIDE TREATMENT OF GONORRHOEA

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SYNOPSIS

50 male patients with uncomplicated acute gonococcal urethritis were treated with 2 gm. of spectinomycin dihydrochloride. Of the 45 patients followed up for a two week period 1 failure was recorded. Spectinomycin dihydrochloride is effective and safe in the treatment of gonorrhoea.

The treatment of gonorrhoea has turned out to be an enigma in modern therapeutics. The advent of effective antibiotics has not helped to stamp out the disease but on the contrary the emergence of partially resistant and absolutely resistant strains of gonococci have contributed to making the disease the second commonest infectious disease in the World today. This unfortunate trend has necessitated the search for antibiotics both acceptable to the patient population and doctors from time to time.

Spectinomycin sulphate was first used in the treatment of gonorrhoea in 1960 (Willcox, Taylor and Laird). Failure rates between 6 to 9 percent were recorded by these workers. Recently the more potent spectinomycin dihydrochloride has been introduced for general use. Spectinomycin dihydrochloride is a water soluble, stable amino glycoside antibiotic derived from streptomyces spectabilis. It is active against *Neisseria gonorrhoea*. Following an intramuscular injection of 2 grams of the antibiotic a peak serum concentration of 103 microgram/ml. is reached within an hour and sufficient inhibitory concentrations up to an optional period of 8 hours maintained. The antibiotic is excreted unchanged in the urine within 48 hours. No serious side effects from its use in the treatment of gonorrhoea have been reported.

The purpose of this paper is to report on the response of local gonococcal infections to this new antibiotic.

MATERIAL AND METHODS

50 male patients with acute uncomplicated gonococcal urethritis were treated with this new antibiotic. Diagnosis of gonorrhoea was based on

(i) history of exposure; (ii) compatible incubation period; (iii) the presence of a urethral discharge, and (iv) the demonstration of intra and extra cellular diplococci on gram stained smears. 2 gm. of spectinomycin dihydrochloride by deep intra muscular injection was administered after diagnosis. Patients were requested to report on the 3rd, 7th and 15th post-treatment days and examined for the presence of urethral discharge. Urine was inspected for sediments and if indicated gram smears of either the discharge or sediments examined for the presence of gram negative diplococci. The V.D.R.L. test was done routinely on the day of treatment, 6 weeks and 12 weeks later to detect any concurrent syphilitic infection. Treatment was deemed to have failed if gram negative diplococci appeared within 14 days of treatment and if patient denied any further marital or extra marital intercourse. The criteria for cure were the absence of urethral discharge, urinary sediments, and bacteriological evidence of any infection.

RESULTS

Of the 50 patients admitted to the study, 45 returned for regular check-ups; 5 defaulted between the 3rd to 15th day; 1 patient well on the 3rd post treatment day admitted to re-exposure on the 4th post treatment day and presented on the 7th day with urethral discharge, and was presumed to be reinfected. In one patient treatment failed and 43 were cured of their infection (Table I).

DISCUSSION

Calculations of true failure rate are made difficult by the inevitable defaulters in post-treatment examination in treatment studies of this type. Various authors have attached various significances to defaulters. Though probably correct within a given sociological set up, their conclusions may not apply universally.

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TABLE I
RESULTS OF TREATMENT WITH 2 GM. OF TROBICIN DIHYDROCHLORIDE IN
GONOCOCCAL URETHRITIS

No. Admitted to Trial	No. Followed-up	No. Defaulted	No. Cured	No. Failed	No. Re-infected	% Failure Rate		Side Effects
						Known Minimal	Maximum Theoretical Possibility	
50	45	5	43	1	1	2	12	Nil

Patients may default post-treatment examinations because they see no point in further examinations as they feel well. These are probably cured. On the other hand there may be those who default because of disillusionment with failed treatment. Just how many defaulters are cured and how many are failures is anybody's guess. The theoretical possibilities may be the extremes, all the defaulters being either cured or failed.

In order to approach statistical reality we have chosen to express true failure rate as being between the minimum known failure rate and the theoretically possible maximum failure rate. The minimum known failure rate is calculated from the number of patients who are known to have failed treatment divided by the total number of patients treated multiplied by 100. The theoretically possible maximum failure rate is calculated from the number of known failures plus the number of defaulters, divided by the total number of patients treated multiplied by 100.

Calculated this way the true failure in our series is between a minimum of 2% and a theoretical

maximum of 12%. The truth is probably nearer to the lower limit. This makes it a satisfactory antibiotic for use in the treatment of gonorrhoea, especially for patients who are penicillin sensitive.

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Spectinomycin Dihydrochloride: Trade Name: Trobicin.