

# RIMACTANE IN ACUTE GONOCOCCAL URETHRITIS

By

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Rimactane (rifampicin) is 3-(4-methyl-1-piperazinyl-iminomethyl)-rifamycin S. V. It is a orange-red crystalline powder, sparingly soluble in water, very soluble in methanol and ethyl acetate. It is a semisynthetic antibiotic belonging to the group of rifamycins which are produced by *streptomyces mediterranei* and have shown in vitro activity against many gram-positive and gram-negative organisms and also against mycobacterium tuberculosis.

In man, the maximum concentration of rifampicin is reached in two to four hours after oral administration. With a single dose of 900 mg. serum concentrations as high as 27.20 ug/ml have been obtained at 2 hours, 15.44 at eight hours, 8.33 at 12 hours and 1.64 at 24 hours.

In the vitro studies, the minimal inhibitory concentration of this antibiotic against gonococci has been found to be 0.02 ug/ml. The serum concentrations rise more quickly and are higher when the drug is taken on empty stomach. Rifampicin diffuses into all the tissues of the body and good concentrations have been found in the prostate, seminal vesicles and bladder wall.

In man rifampicin by mouth is well tolerated and daily doses of 600 mg. have been given to adults for periods of up to 360 days without causing side effects. It produces temporary reddish orange discolouration of urine. Its microbiological data suggests that one oral dose should be effective in the treatment of gonorrhoea (Table-1).

TABLE 1

## *Results of single dose Rifampicin Regime in Gonococcal Urethritis*

Authors	Year	No. of Cases	Dose Schedule	Cure Rate
Cobbold, R. J. C. et al	1968	89	900 mg. Single dose	88.8%
Ciaula, V. & Rantuccio, F.	1968	91	900 mg Single dose Rimactane	95.6%
Califano, A. & Tagliavini, R.	1968	32	900 mg. Single dose Rimactane	96.8%
Migliano, L.	1969	17	900 mg. single oral dose	100%

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## MATERIAL AND METHODS

In our series, a total number of 30 cases of acute gonococcal urethritis were treated in the Skin and V. D. Out-patient Department of the G. T. Hospital, & Grant Medical College, Bombay, with single dose regime of Rifampicin. The study

comprised of 28 male and 2 female cases of acute gonococcal urethritis. In all these cases, the diagnosis was based on finding intra-cellular gram-negative diplococci in urethral smears and positive cultures on chocolate agar media. V. D. R. L test was also done in every case. All the patients received a single oral dose of 900 mg. Rifampicin. All patients were re-examined on third and seventh days. In this series, the average incubation period was of 4 days. Out of 30, 18 patients had contracted the disease from prostitutes, 5 patients from marriage partners and 7 patients from friends.

#### SIDE EFFECTS OR TOXIC REACTIONS

In our series all the 30 patients tolerated a single oral dose of 900 mg. (6 capsules) Rifampicin very well. Not a single patient complained of any side effect or toxic reaction. They, however, reported that they had red coloured urine for about 6 to 8 hours after taking the capsules.

#### RESULTS

Rifampicin could stop urethral discharge completely within 2 days in 28 out of 30 cases. In all these 28 cured cases, prostatic massage was done on the 7th day and the sediment of the urine after the prostatic massage was found negative for gonococci on smear and culture. Out of 30, in two cases Rifampicin failed to make urethra dry within 2 days and urethral smear revealed gonococci and plenty of pus cells. Both these patients had red-coloured urine for ten hours after the intake of the drug and one of these two patients had contracted the disease from a prostitute. Another patient had contracted the disease from a girl friend. These two cases responded to two injections of 12 lakhs procaine penicillin given intramuscularly on two consecutive days.

#### DISCUSSION

A single oral dose of 900 mg. Rimactane cured 28 out of 30 male cases of acute gonococcal urethritis. The drug was well tolerated by all the patients. All patients had red urine for six to eight hours after the administration of the drug. Sixty per cent cases had contracted the disease from prostitutes. Our cure rate of 93.3% compares favourably well with those of previous workers viz. Cobbold, R. J. C. *et al* 88.8%, Ciaula, V. and Rantuccio, F. 95.6% Califano, A. and Tagliavini, R. 96.8% and Migliano, L. 100%. Rimactane is a promising and well-tolerated drug for the treatment of gonococcal urethritis.

#### SUMMARY AND CONCLUSIONS

Thirty cases of acute gonococcal urethritis were treated with Rifampicin in the Skin and V. D. Department of the G. T. Hospital, Bombay. A single oral dose of 900 mg. Rifampicin was given to all the patients. In every case diagnosis was first confirmed by smear as well as culture on chocolate agar media. Sixty per cent of the cases had contracted the disease from prostitutes. Average incubation period was of 4 days. Out of thirty, 28 cases could be cured with single oral dose of 900 mg. Rifampicin (cure rate 93.3%). Rifampicin was ineffective only in two cases.

The drug was very well tolerated by all the patients. All patients had red urine for 6 to 10 hours after the administration of Rifampicin. In our opinion Rifampicin is as safe as well as very promising drug for the management of acute gonococcal urethritis. It is ideal for cases intolerant to penicillin and does not mask syphilis.

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