

FOLLOW UP OF ACUTE GONOCOCCAL URETHRITIS IN MALE PATIENTS TREATED WITH NORFLOXACIN

KVR Chari, MA Tutakne, R Dhir

This subject was undertaken to confirm the efficacy of norfloxacin in acute gonorrhoea and to note the relapse if any during the follow up period of 3 months. 27 male patients suffering from acute gonorrhoea were treated with 800 mgs of norfloxacin as single oral dose. In all cases, gonococci disappeared from urethral smears by 8 hours, urethral discharge subsided by 72 hrs, urine on naked eye examination cleared in 4 days except in 1 case and burning micturition subsided by 7 days. Cure rate was 100% in the study. No relapse was found at the end of follow up of 3 months. No adverse reactions were observed to norfloxacin except headache in 2 cases. Norfloxacin was safe and effective in the treatment of acute gonorrhoea.

Key Words : Acute gonorrhoea, Norfloxacin

Introduction

Gonorrhoea is reported to be the second commonest sexually transmitted disease next to syphilis in India with its incidence varying from 12.1% to 29.4% of all STD cases.¹ The advent of penicillin resistant strains both in western countries and in India led to the induction of various antibiotics alternatively to penicillin in the treatment of acute gonorrhoea. Spectinomycin was considered alternate choice² but spectinomycin resistant strains among isolates of Penicillinase Producing Neisseria Gonorrhoeae (PPNG) have been reported.^{3,4} Norfloxacin a fluoroquinolone antibacterial agent has been found to be effective in the treatment of acute gonorrhoea.^{5,6}

This study is undertaken to confirm the efficacy of norfloxacin in acute gonorrhoea and to follow up the treated patients for a period of 3 months to assess the final cure and relapse, if any.

From the Department of Dermatology & STD, Command Hospital (Western Command), Chandimandir - 134107, India.

Address correspondence to : Lt Col KVR chari

Materials and Methods

Twenty seven male patients of acute gonorrhoea admitted to STD ward at Command Hospital (Western Command) Chandimandir were taken for study. Detailed history and findings on clinical examination were noted. Diagnosis of acute gonorrhoea was confirmed by urethral smear examination stained for gonococci by Gram's stain. Culture for gonococci was done in patients who denied history of exposure. Blood for TLC, DLC, VDRL, liver function tests and ELISA test for HIV were done on admission in addition to urine for two glass test, routine (RE) and microscopic examination (ME).

Norfloxacin 800 mgs was given as single oral dose after the confirmation of diagnosis of acute gonorrhoea. Urethral discharge was collected and stained for gonococci by Gram stain every 2 hrs for first 12 hrs or till urethral discharge was present. Patients were examined on the 7th and 14th day before being discharged from the hospital. Urine on naked eye examination, RE and ME were done daily for 3 days and later on 7th and 14th day. The day on which burning

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micturition subsided was noted. Treatment failure was considered if urethral discharge recurred and gonococci were seen in the urethral smears any time up to 14 days.

Patients were called on surveillance after 3 months when urine for 2 glass test, RE and ME were done. Prostatic smears were taken and stained for gonococci and pus cells by Gram's stain. Blood for VDRL and ELISA test for HIV were done. If all surveillance tests were normal, patient was declared cured.

Results

Out of 27 patients, 9 were unmarried and 18 were married. The age ranged from 20 to 39 years. 10 (37.1%) had sexual contact with prostitutes, 6 (22.2%) with amateurs, 6 (22.2%) had marital exposure and 5 (18.5%) denied any sexual exposure. Range of incubation period in 16 cases, where date of infection could be ascertained by history was between 2 to 30 days. 9 (56.25%) had incubation period upto 10 days and 7 (43.75%) developed the symptoms after 10 days. Urethral discharge was mainly purulent. It followed burning micturition by 1 to 5 days. 7 (26%) did not have any burning micturition. Urine for 2 glass test showed haziness in all samples in first glass and in both the glasses in 1 case.

After treatment with norfloxacin (800 mg stat orally), gonococci disappeared from urethral smears by 2 hrs in 1 case, by 4 hrs in 9 cases, by 6 hrs in 14 cases (51.9%) and by 8 hrs in 3 cases (11%). Thus gonococci disappeared in all smears by 8 hrs.

Urethral discharge stopped in 5 cases (18.5%) in less than 24 hrs, between 24 hrs to 48 hrs in 12 cases (44.4%), between 48 to 60 hrs in 9 cases (33.3%) and more than 60 hrs in 1 case (3.8%).

Burning micturition subsided in all cases by 72 hours. Urine by naked eye examination cleared in less than 3 days in 8 cases (29.6%), in 3-4 days in 18 cases (66.6%) and in only 1 case persisted for more than 7 days.

All the cases which were followed upto 3 months after treatment did not show any recurrence of gonorrhoea,

No adverse reactions to norfloxacin were observed except for headache in 2 cases.

Comments

Norfloxacin, a flourinated 4 aminoquinolone antibacterial agent is related chemically to nalidixic acid with more wide spectrum antibacterial action and greater potency. It is very effective orally. It is bactericidal and acts by inhibiting bacterial DNA gyrase thereby inhibiting DNA synthesis.⁷ The minimum inhibitory concentration (MIC) of the drug is 0.06 mcg/ml for betalactamase negative *Neisseria gonorrhoea* and 0.1 to 0.5 mcg/ml for PPNG organisms. When administered orally, norfloxacin gives peak serum concentration of 2.41 mcg/ml in 1 to 2 hrs with 800 mg dosage. About 30% of administered norfloxacin is excreted in the urine as parent drug. In urine, it's concentration exceeds 200 mcg/ml in 2-3 hrs and remains more than 300 mcg/ml for 12 hrs in patients having normal renal function. Hence norfloxacin has additional advantage of flushing the urethra with the drug.

100% cure rate was reported in norfloxacin in uncomplicated gonococcal infection both against PPNG and non-PPNG strains⁵ and in uncomplicated anorectal gonorrhoea.⁶

In our study with 800 mg oral dose of norfloxacin, gonococci disappeared by 8 hrs in

all cases. Thin urethral discharge and pus cell continued to appear later but these cleared by 60 hrs in 96.2% cases. Only in 1 case, urethral discharge persisted beyond 60 hrs which was later diagnosed as post gonococcal urethritis and was treated accordingly. All above investigations were normal by 7th and 14th day after treatment.

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