

## TREATMENT OF NON-SPECIFIC URETHRITIS IN MALES WITH DEMECLOCYCLINE HYDROCHLORIDE

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Fifty patients with non-specific urethritis were treated with demecloxycline hydrochloride in doses of 600 mg and 900 mg respectively per day for three weeks. The cure rates obtained were 90% and 88% respectively. The side effects included stomatitis in one; nausea, vomiting and diarrhoea in 5; and phototoxicity in two cases.

**Key words :** Non-specific urethritis, Therapy, Demecloxycline hydrochloride.

Non-specific urethritis (NSU) is now the commonest reported sexually transmitted disease (STD) in the West.<sup>1</sup> In spite of the lack of awareness among the physicians and the absence of appropriate laboratory support, in India the disease has shown a rising trend.<sup>2</sup> Only a few etiologic studies of the disease have been reported from India.<sup>3,4</sup> Tetracyclines are still the mainstay of therapy in NSU.<sup>5</sup> Relapses after therapy are not infrequent.<sup>1</sup> Erythromycin and rifampicin have also been used,<sup>6</sup> but are more expensive and toxic, and offer no significant advantage over tetracyclines. Demecloxycline hydrochloride has a long half-life of sixteen hours and can be administered at a lower and less frequent dosage than the parent tetracycline.<sup>7</sup>

This study was designed to evaluate the efficacy of demecloxycline hydrochloride in NSU.

### Materials and Methods

Subjects were diagnosed to have NSU if there were 10 or more polymorphonuclear leucocytes per high power field (PMNL/HPF) on microscopy of the urethral discharge.<sup>4</sup> Gonorrhoea, trichomoniasis and candidiasis were excluded by : Microscopy of a wet-film preparation and Gram-stained smear of the urethral

discharge, and (2) Culture of the urethral discharge on chocolate agar, Thayer-Martin and Feinberg-Whittington media.

Each patient was then assigned randomly to receive demecloxycline hydrochloride in doses of 600 mg (300 mg every twelve hours) or 900 mg (300 mg every eight hours) orally per day for three weeks. The patients were examined every week during and after the treatment before passing their morning urine. The presence of urethral discharge was noted and appropriate tests were undertaken (microscopy of a wet-film of the discharge, and examination of the centrifuged urinary sediment). In the absence of a urethral discharge, a prostatic massage was performed in the fourth week and the prostatic fluid was examined microscopically. A patient was considered cured if : (1) the clinical examination revealed no urethral discharge, (2) the centrifuged morning specimen of urine showed less than 10 PMNL/HPF, and (3) if the prostatic fluid showed less than 10 PMNL/HPF.

A VDRL slide test was performed at the first visit and after three months. The patients were instructed to abstain from sex and alcohol during the period of therapy and evaluation. A condom was advised in case patients were unable to avoid intercourse during this period.

### Results

Fifty patients were included in the study between May 1983 and January 1984. Majority (78%) of the patients were between 20 to 29

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years of age. All the patients belonged to the low and middle socio-economic class. All were literate, and 36% of the patients were college graduates. Prostitutes and call-girls were the major (40%) source of infection; spouses were the source in 32%, and in the rest the disease was acquired from girl-friends and casual acquaintances. Promiscuity (56%) and alcoholism (70%) were common. Eighteen (36%) patients had suffered from one or more sexually transmitted diseases in the past and of these, fourteen had a history of urethritis.

The urethral discharge was scanty in the majority (78%) of patients. It was mucoid in 32%, muco-purulent in 56% and frankly purulent in 12% of the patients. Meatitis (inflammation of the external urethral meatus) was minimal or absent in most patients.

Only 37 of the fifty patients could complete the study. Ten patients defaulted during the course of therapy (three in the low and seven in the high dose group), while in three more patients the drug was stopped due to severe toxic reactions. The cure rates were similar in the two groups, the overall cure rate being 89% (Table I).

**Table I.** Comparison of the two dosage schedules with demeclocycline hydrochloride.

Dosage schedule	Number of patients		
	Treated	Cured	Percentage
600 mg daily	20	18	90
900 mg daily	17	15	88

### Comments

The incidence of NSU in India is not known. At our centre, the incidence of NSU increased four fold from 1.3% of the total STD cases seen in 1977, to 5.6% in 1982. During the same period the incidence of gonorrhoea rose marginally from 8.1% to 9.3%, while that of syphilis actually declined from 11.8% to 9.7%. In the West, NSU is commoner in the higher socio-economic classes.<sup>1</sup> Our patients in contrast,

belonged predominantly to the weaker sections of society; this is representative of all patients attending this hospital as patients belonging to the higher socio-economic strata tend to prefer private practitioners for treatment.

The proportion of patients acquiring the disease from professionals (i.e. prostitutes and call girls) and non-professionals (i.e. casual acquaintances and girl friends) were similar to those reported previously from our clinic.<sup>10,12</sup> Unlike the West,<sup>13</sup> casual acquaintances have not yet emerged as a major public health problem in the transmission of STD in our country.

Adverse reactions seen in 8 patients were, in general, more frequent and more severe with the higher dose of the drug.

The cure rates were similar in the two dosage schedules used in the present study. Similar results were obtained by Vijayalakshmi et al<sup>14</sup> at Madras. It would therefore, seem reasonable to suggest a dose of 300 mg of demeclocycline hydrochloride twice daily for three weeks.

### Acknowledgement

The supplies of demeclocycline hydrochloride were made by the Cynamid India Ltd.

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