

## Prescription Pattern in Gynaecology- A retrospective study in a South Indian Teaching Hospital

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### Abstract

Gynaecological problems are common in India because of socioeconomic, hygienic, literacy problems. Hospitals in most of the tribal regions of underdeveloped nations lack proper healthcare facilities. Therefore we planned the present study. In this retrospective study, case records of 50 hospitalized patients belonging to gynaecology department were selected randomly. Majority of cases were in between the age group of 21-25 (54%). A total of 253 drugs were prescribed. Most preferred route of drug administration was intravenous route. Antimicrobials were the most commonly prescribed drugs (48.22%) followed by vitamins and other supplements (13.44%). Among antimicrobials, Metronidazole (25.40%) was the leading drug followed by Ampicillin (20.49%). 53.35% drugs were prescribed by trade name. Fixed dose combination was given to 2% patient. We conclude that use of cheap and easily available drugs like Ampicillin and Metronidazole are still common in the region which is a good practice for this underdeveloped region.

**Keywords:** Ampicillin, Antimicrobials, Generic drugs

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### Introduction

According to World Health Organization (WHO) rational use of medicine means “patients receive medicines appropriate for their clinical needs, in doses that meet their individual requirements, for an adequate period of time, and at the lowest cost to them and their community [1]. But it is observed that most of the prescriber throughout the world specifically in developing countries like India are not involved in rational use of medicines [2]. Drugs which are ineffective, unnecessary, unrelated to diagnosis, medically inappropriate, expensive and multiple drugs are prescribed commonly not only in developing countries but also in developed countries [3].

Use of irrational drugs has lot of adverse consequences like delay/inability in affording relief/ cure of the disease, have more chances of adverse effects, loss of man days, increased incidence of morbidity and mortality,

emergence of microbial resistance, financial loss to patient and community, loss of patients confidence in the doctor, lowering of health standards of patients and community and perpetuation of public health problem [1,3]. Effects of irrational prescriptions are more in underdeveloped regions since such regions are comparatively having less health care facilities. There are various factors which are responsible for irrational drug prescription, such as often teachers/ seniors, renowned physicians are role model for drug prescription, vigorous drug promotion by pharmaceutical industries, unethical inducement to doctors and pharmacists and pill for every ill belief of patients [1, 3-5]. It shows that irrational prescription is becoming habit which is difficult to treat [6].

Drug utilization studies which include prescription audit and retrospective analysis of medical records can be conducted to assess the rational prescribing skills of clinicians. Such types of studies are helpful for the assessment of

beneficial and adverse impacts of the prescribed drugs [3, 7-9].

Adilabad district has predominant tribal and rural population and it is relatively underdeveloped district [10]. In this background the present study was planned in Gynaecology department of Rajiv Gandhi Institute of Medical Sciences (RIMS) Adilabad which is the only tertiary care centre of the district so that the status of prescription pattern can be assessed and measure to improve the status can be initiated.

## Materials and Methods

Present study was conducted at RIMS Adilabad. It was a retrospective study carried out during the year of 2011. A total of 50 hospitalized cases belonging to Gynaecology department of the institute were included in the study. All the cases were selected randomly from medical record section of the institute. OPD cases were excluded from the study. Case sheets were examined and findings recorded for various parameters like average age range of patients, route of drug administration, types of drugs consumed, types of antimicrobials used, most common and least common antimicrobials, culture and sensitivity tests, use of generic and branded drugs, fixed dose combination and non pharmacological measures. Permission was granted by institutional authorities. Data was analyzed using Microsoft Office Excel 2007.

## Results

Most of the cases were in between the age group of 21 to 25 years 27 (54%) followed by 15 to 20 years of age 12 (24%) while least cases 1 (2%) were in the age group of 31 to 35 years (Table-1). A total of 253 drugs were prescribed by the gynecologists to the 50 cases. Most preferred route of drug administration was intravenous route (143 drugs, 56.32%) followed by oral (84 drugs, 33.20%) and intramuscular (26 drugs, 10.28%) route. Antimicrobials were the most commonly prescribed drugs (48.22%) followed by vitamins and other supplements which

constitute 13.44%. In other group of drugs (21.54%), different groups were used with less than 5% drugs in each group (Table- 2). Out of a total 122 antimicrobials used, Metronidazole (25.40%) was the most commonly used antimicrobials followed by Ampicillin (20.49%) while Amikacin (2.46%) was least used drug (Table- 3).

**Table-1: Demographic profile (n=50)**

Age Group (Years)	Number	Percentage
15- 20	12	24%
21- 25	27	54%
26- 30	10	20%
31- 35	01	02%
<b>Total</b>	<b>50</b>	<b>100%</b>

**Table-2: Drugs (n=50, Number of drugs= 213)**

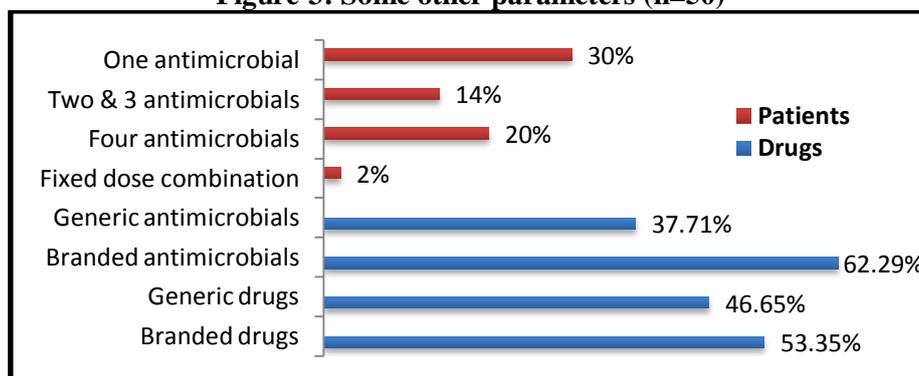
Group of drugs	Total
Antimicrobials	122 (48.22%)
Others	54 (21.34%)
Vitamin & other supplements	34 (13.44%)
*NSAIDs	30 (11.86%)
Corticosteroids	13 (05.14%)
<b>*NSAIDs= Nonsteroidal antinflammatory drugs</b>	

**Table-3: Frequently used antimicrobials (n=50)**

Antimicrobials	Percentage
Metronidazole	31 (25.40%)
Ampicillin	25 (20.49%)
Gentamycin	18 (14.75%)
Cefotaxime	18 (14.75%)
Ciprofloxacin	17 (13.93%)
Cefixime	10 (08.20%)
Amikacin	03 (02.46%)

Out of all 253 drugs, 53.35% drugs were prescribed by trade name and in antimicrobial group 62.29% were branded drugs. Cases were managed by empirical treatment and culture and sensitivity was not done in antimicrobial recipients. Fixed dose combination was given to 2% patient in which iron and folic acid was used. Single antimicrobial therapy was given to 33.33% cases (Figure- 3).

**Figure-3: Some other parameters (n=50)**



## Discussion

The study was planned with the intention to know the status of drug prescription in the department of Gynaecology of RIMS Adilabad so that better suggestions can be given for improvement. We found use of 253 drugs in prescriptions by clinicians in the present study. Rohra DK et al [11] found majority of drugs prescribed during the 3<sup>rd</sup> trimester of pregnancy (55.4%) and average number of drugs prescribed was  $1.66 \pm 0.14$ . In the study of Das B et al [12] most of the female received multiple drugs which included mostly nutritional supplements like iron, vitamins. Polypharmacy was also reported by Kumari R et al [13] in their study which was conducted in Lucknow, north India and they found lowest average of number of drugs per prescription was  $2.6 \pm 1.6$  at tertiary level. But that study was not conducted on selective Gynaecology cases. Use of more number of injectable drugs was observed by Patel et al [2] while some workers like Rehan et al [14] reported use of less number of injectable drugs by interns in north India [2,14].

In our study most of the drugs used were antimicrobials, vitamins and other supplements. Most common antimicrobials were Metronidazole, Ampicillin, Cephalosporins and Ciprofloxacin. Use of multiple antimicrobials without culture sensitivity test was common. Bapna et al [15] in South Indian population observed major use of antimicrobials, vitamins, antihistamines, and non steroidal antiinflammatory drugs in the prescriptions. Use of routine antimicrobials which are common

indicates better trend as Metronidazole and Ampicillin are cheap and effective drugs [16,17]. There is no uniform report regarding use of generic drugs as different trends are observed in different countries and regions [16,17]. Use of branded drugs and specifically antimicrobials always increases treatment cost.

## Conclusion

It is now policy in many hospitals to give higher antibiotics for trivial infections. Each should have its own antibiotic policy depending upon the common organisms found and their sensitivity to antibiotics. Use of cheap and easily available drugs like Ampicillin and Metronidazole are still common in the region which is a good practice for this underdeveloped region. More use of generic drugs can be useful to reduce to cost of disease management.

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