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PRESCRIPTION PATTERN OF DRUGS IN URINARY TRACT INFECTION PATIENTS IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Urinary tract infection (UTI) is an extremely common clinical problem which may involve urethra, bladder, uterus and kidney. Urinary tract infections are one of the most common microbial diseases encountered in medical practice affecting people of all ages. The rationality of the prescriptions will help the physician in selecting the most appropriate cost effective treatment. The science of prescribing or prescription writing is a mode of conveying the drug message from a prescriber to the patient. Prescribing drugs is an important skill which needs to be continuously assessed and refined accordingly. **Objective**s: To study the prescription pattern of drugs in UTI patients. **Materials And Methods:** It is a prospective observational study conducted in BMCH&RC for a period of six months. Patients admitted in General Medicine, obstetrics and gynaecology and Paediatric Units. The data was collected from medical records of the patients and documented in suitable designed form. **Results:** A total of 82 patients of UTI patients were enrolled during the study period. 33patients of males and 49 of female patients were diagnosed with UTI. 41-60 years age group of UTI patients are more. Out of 82 patients 16.1% have been prescribed with cephalosporin, 1.3% prescribed with flouroquinolones, 13.6% prescribed with other antibiotics. **Conclusion**: The presentstudy may be propitious for the physicians for optimizing rational use of drugs and to improve the quality of patient care.

KEYWORDS: UTI.

1. INTRODUCTION

Urinary tract infection in pregnancy may result in low birth weight infants, premature delivery and occasionally stillbirth. It is well documented that effective treatment of UTI's significantly reduces the incidence of pyelonephritis, premature deliveries and low birth weight infants, Prescribing drugs is an important skill which needs to be continuously assessed and refined accordingly. Commonly, the prescription behaviour is influenced by many factors like unethical drug promotion, lack of knowledge, direct consumer advertising and non-availability of drugs. So there is a chance of prescribing irrational drugs. The rationality of the prescriptions will help the physician in selecting the most appropriate cost effective treatment Drug utilization research help in identification of clinical use of drugs in populations and its impact on healthcare system. Treatment approaches for UTI depend on various factors. Some of the patient factors which impact the choice of antibiotic used include age, gender, allergy status and presence of secondary complications or risk factors. In many hospitals the choice of antibiotic usage depends upon the hospital formulary or antibiotic guidelines. The antimicrobial agents most commonly used to treat uncomplicated urinary tract infections. Rational drug prescribing is defined as "the use of the least number of drugs to obtain the best possible effect in the shortest period and at a reasonable cost. Monitoring of prescription could identify the associated problems and provide feedback to the prescriber so as to create awareness about the irrational use of drugs.[7]

Therefore by considering the above statements, this study is aimed to identify the pattern of prescription among urinary tract infection diseases patients admitted in General Medicine, obstetrics and gynaecology and paediatric departments. The present study was conducted to observe the UTI disease, which are most frequently being treated.

2. MATERIALS AND METHODS

A prospective observational study was study was approved by the Institutional Ethics Committee, of SJM College of pharmacy, Chitradurga, kanataka. The study was carried out Patients admitted in General Medicine, obstetrics and gynaecology and Paediatric in Basaveshwara Medical College & hospital.

- Subjects of all age groups.
- Patients of both genders.
- Both inpatients and outpatients
- Willing to sign informed consent form

Assessthe prescription pattern of the patient medication chart.

2.1 Study procedure: The study wiil be conducted in inpatient and outpatient wards of general medicine, obstetrics and gynaecology and paediatric departments of both genders are selected for the study. Informed consent will be provided and explaine to the patiend and their representatives in their laymen laungage before including them to rhe study. A pre-designe data collection form will be applied to collect patient demographics details details include name, age, sex, medical history, medication history, environmental factors, lab data, (antibiotic usage in pre and post culture sensitivity test) and current therapy. The collected data will be assessed and analysed by using stastical methods.

2.2 Statistical Analysis: The data was entered in Microsoft Excel-2010 version and the results are analysed using Statistical Package for Social Services (SPSS 19.0). Descriptive method was used for the analysis.

3. RESULTS

1. **Distribution of Patients According to Department:**In this study, patients were taken from three different departments. Out of 82 patients, 11 (13.42%) were from pediatrics, 64(78.04%) patients from medicine, 7(8.54%) patients from OBG. The results are shown in table 2 and graphically represented in figure 1.

Table 1: Distribution of patients According to Department.

Sl. No	Department	No. of Patients	Percentage
1.	Pediatrics	11	13.42%
2.	Medicine	64	78.04%
3.	OBG	7	8.54%
	Total	82	100%

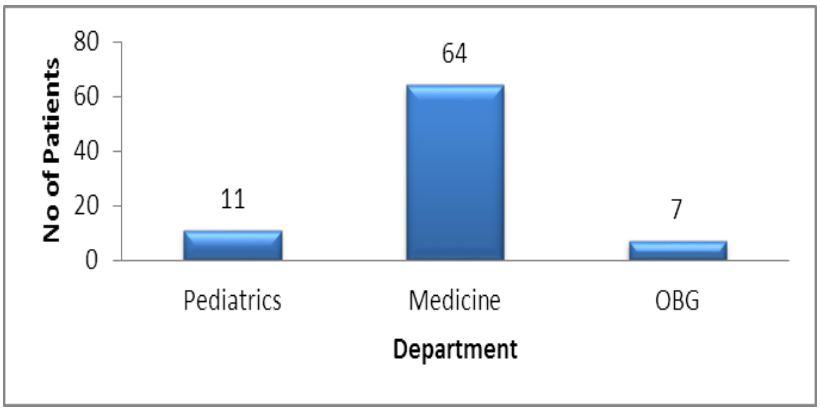

Figure 1: Distribution of patients According to Department.

1. Distribution of Patients According to Gender

In this study population, 6 patients were males and 4 patients were females from pediatrics and 27 patients were males and 38 patients were females from medicine and 7 female patients from OBG.

Table 2: Distribution of patients According to Gender.

Sl. No	Gender	Pediatrics	Medicine	OBG
1	Male	6	27	0
2	Female	4	38	7
	Total	10	65	7

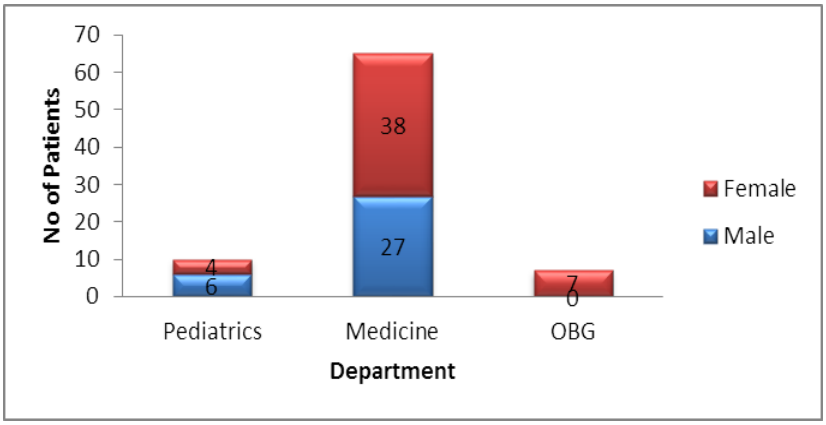

Figure 2: Distribution of patients According to Gender.

2. Distribution of Patients According to Age

In this study, patients were divided into four groups based on different age. Out of 82 patients 11 from pediatrics and 2 from medicine within age group of 1-20 years followed by 13 from medicine and 5 from OBG within age group of 21-40 years followed by 27 patients from medicine and 2 from OBG within age group of 41-60 years followed by 22 patients from medicine are above 60 years. The results are shown in table 4 and graphically represented in figure 5.

Table 3: Distribution of patients According to Age Group.

Sl. No	Age	Pediatrics	Medicine	OBG
1	0-20	11	2	0
2	21-40	0	13	5
3	41-60	0	27	2
	>60	0	22	0
	Total	11	64	7

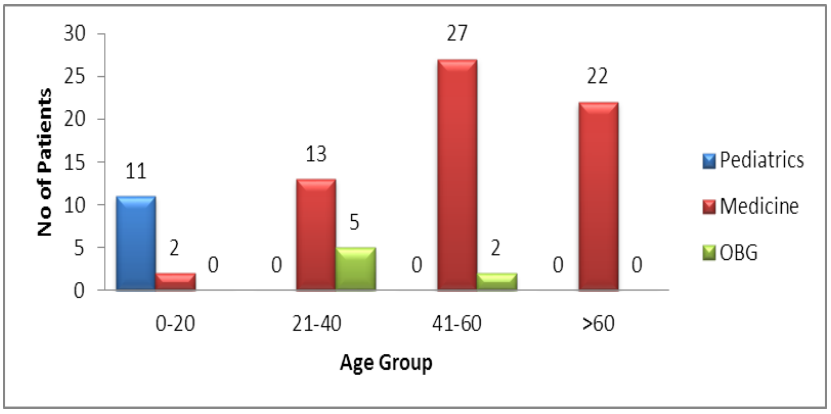

Figure 3: Distribution of patients according to age group.

3. Distribution of Patients According to Past Medical History

In this study out of 82 patients, 2 patients from pediatrics and 36 patients from medicine and 2 patients from OBG having medical history. The results are shown in table 4 and graphically represented in figure 4.

Table 4: Distribution of patient's according to Past Medical History.

Sl. No	Past Medical History	Pediatrics	Medicine	OBG
1	Present	2	36	2
2	Absent	10	27	5
	Total	12	63	7

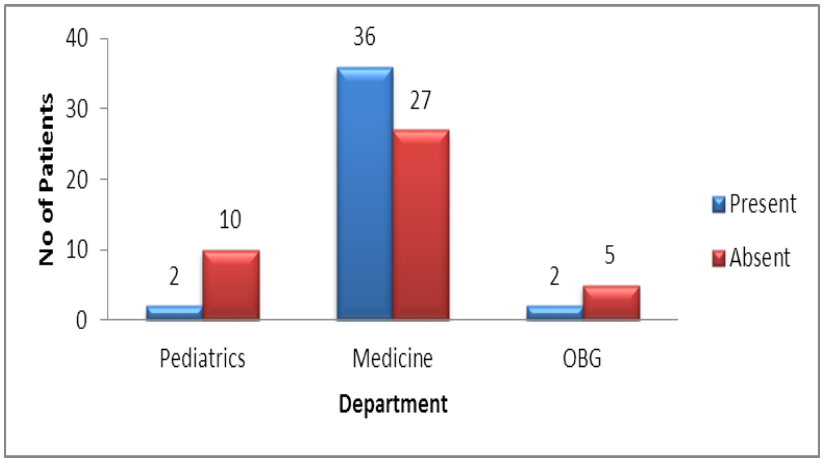

Figure 4: Distribution of patients according to Medical History.

4. Distribution of Patients According to Diagnosis

In this study out of 82 patients UTI is seen only in 2 patients from pediatrics and 12 patients from medicine and 1 patient from OBG followed by UTI with Co-Morbid condition is seen in 14 patients from pediatrics and 47 patients from medicine and 6 patients from OBG. The results are shown in table 5 and graphically represented in figure 5.

Table 5: Distribution of Patients According to diagnosis.

Sl. No	Diagnosis	Pediatrics	Medicine	OBG
1	Only UTI	2	12	1
2	UTI With Co-Morbidities	14	47	6
	Total	16	59	7

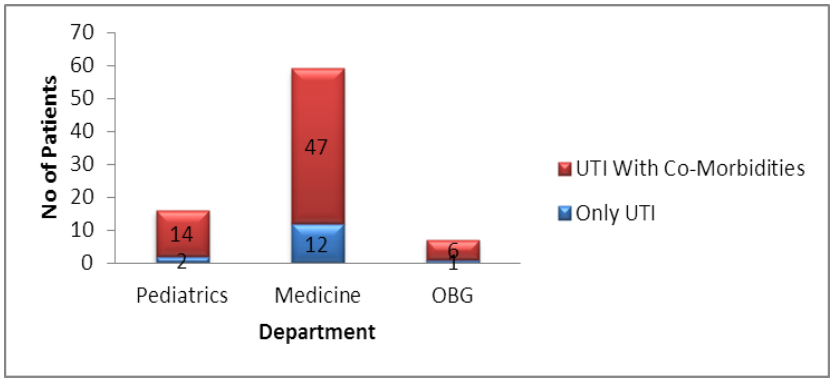

Figure 5: Distribution of patients According to diagnosis.

5. Distribution of Patients According to Class of Drugs

In this study, the most class of drugs were disodium 1.365%, cephalosporin's 16.12%, tetracycline's 2.45%, Other antibiotics 13.66%, anti-emetics 11.5%, antacids 3.27%, PPIS 15.30%, Flouroquinolones 1.365%, anti pyretics 16.12%, other drugs 17.75%, anti spasmodic 1.1%. The results are shown in table 6 and graphically represented in figure 6.

Table 6: Distribution of patient's according to class of drugs.

Sl. No	Class of Drug	No. of Patients	Percentage
1	Disodium	5	1.365%
2	Cephalosporin's	59	16.12%
3	Tetracycline's	9	2.45%
4	Other Antibiotics	50	13.66%
5	Anti-Emetics	42	11.5%
6	Antacids	12	3.27%
7	Proton Pump Inhibitors	56	15.30%
8	Flouroquinolones	5	1.365%
9	Anti Pyretics	59	16.12%
10	Other Drugs	65	17.75%
11	Anti Spasmodics	4	1.1%
	Total	366	100%

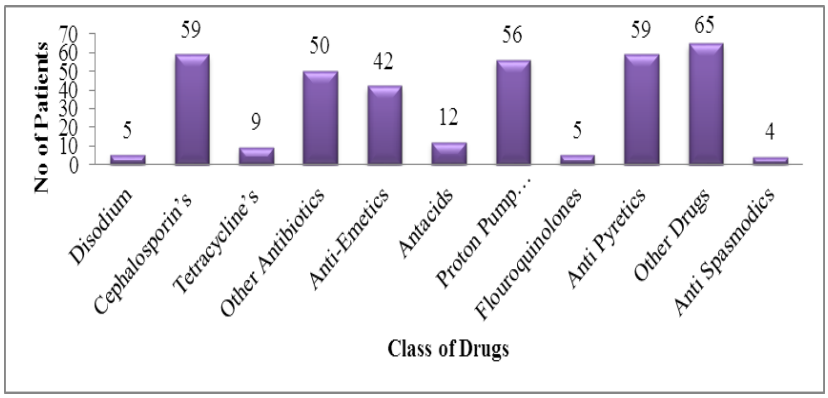

Figure 6: Distribution of Patients according to class of drugs.

DISCUSSION

In our study we have enrolled 82 patients among which males were 33 (40.2%) and females were 49(59.7%). Among them 6 patients were males and 4 patients were females from pediatrics and 27 patients were males and 38 patients were females from medicine and 7 female patients from OBG. A similar study conducted by **Chowta MN**a total of 88 patients were included in the study, out of which 47 (53.4%) were males and 41 (46.6%) were females.[38]

In our study patients were divided into four groups based on different age. Out of 82 patients 11 from pediatrics and 2 from medicine within age group of 1-20 years followed by 13 from medicine and 5 from OBG within age group of 21-40 years followed by 27 patients from medicine and 2 from OBG within age group of 41-60 years followed by 22 patients from medicine are above 60 years. Most of the patients were in 41-60years age group. In our study out of 82 patients, 2 patients from pediatrics and 36 patients from medicine and 2 patients from OBG having medical history of UTI. In our study out of 82 patients UTI is seen only in 2 patients from pediatrics and 12 patients from medicine and 1 patient from OBG followed by UTI with Co-Morbid condition is seen in 14 patients from pediatrics and 47 patients from medicine and 6 patients from OBG.

In our study the most commonly prescribed antibiotics were third generation cephalosporins 16.12%. The other class of drugs were disodium 1.365%, tetracycline's 2.45%, Other antibiotics 13.66%, anti-emetics 11.5%, antacids 3.27%, PPIS 15.30%, Flouroquinolones 1.365%, anti pyretics 16.12%, other drugs 17.75%, antispasmodic 1.1%. A similar study conducted by **Chowta MN** a total of 88 patients were included in the study, the most commonly prescribed antibiotics were third generation cephalosporins.[38] A similar study

conducted by **Feyissa B** a total of 282 patients were included in the study Fluoroquinolones 189 (67.0%) were the most prescribed drugs, followed by penicillin 54 (19.1%), tetracycline 16 (5.7%) and sulpha drugs 14 (5.0%).[1]

CONCLUSION

- 33patients of males and 49 of female patients were diagnosed with UTI and concluded that females are more prone to UTI.
- Among 33 male patients, 6 from paediatrics and 27 from medicine department. Out of 49 female patients 4 from paediatrics, 38 from medicine and 7 from OBG are diagnosed with UTI.
- 41-60 years age group of UTI patients are more.
- Out of 82 patients, 40 patients are having medical history of UTI.
- 15 patients are diagnosed with only UTI and rest 67 patients were diagnosed with UTI and other comorbidities.
- Out of 82 patients 16.1% have been prescribed with cephalosporin, 1.3% prescribed with flouroquinolones, 13.6% prescribed with other antibiotics.

The prescribing pattern could be improved by reducing the number of drugs per prescription. Prescription Indicators recommended by the WHO can help the Health Care Centres to obtain better organization and improve healthcare attention to the public. Thus the present study may be propitious for the physicians for optimizing rational use of drugs and to improve health care in UTI patients.

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REFERENCE

1. Feyissa B, Gashe B. Utilization pattern of antibiotics in urinary tract infection patients in Jimma Hospital, Ethiopia. Albanian Medical Journal, 2015; 2: 14-19.
2. Ramanath KV, Shafiya SB. Prescription pattern of antibiotic usage for urinary tract infection treated in a rural tertiary care hospital. Indian Journal of Pharmacy Practice, 2011; 4(2): 60-63.

3. Sait MSJ, Sarumathy S, Anbu J, Ravichandiran V. Study of drug utilization pattern in a tertiary care hospital during the inpatient admittance in the emergency care department. Asian Jornal of Pharmaceutical and Clinical Research, 2014; 7(1): 146-48.
4. Nagabhushan H, Roopadevi HS, Prakash GM, Pankaja R. A prospective study of drug utilization pattern in cardiac intensive care unit at a tertiary care teaching hospital. International Journal of Basic & Clinical pharmacology, 2015; 4(3): 579-83.
5. Shahab HM, Syedimam R, Jebin MT, Raja VS. Study of the prescription patterns of medication for urinary tract infection in patients admitted to ICU in a tertiary care hospital. INT J CURR SCI, 2015; 17: 50-55.
6. Gidamudi SS, Jadhav SA, Khanwelkar CC, Thorat VM, Desai RR, Naik HG. Antimicrobial utilization pattern of urinary tract infection in tertiary care hospital. Asian J Pharm Clin Res., 2015; 8(6): 161-164.