

Assessment of Rational Drug Prescribing Pattern in Geriatric Patients at Government District Head Quarters Hospital, Krishnagiri

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Article Information

Article Type:	Case Report	*Corresponding author:	Citation: Muhammed Inshar EK, et al. (2019)
Journal Type:	Open Access	Muhammed Inshar EK	Assessment of Rational Drug Prescribing Pattern in Geriatric Patients at Government District Head Quarters Hospital, Krishnagiri.
Volume: 1	Issue: 1	Department of Pharmacy Practice	Med Healthcare Rep, 1(1);1-3
Manuscript ID:	MHR-1-101	Padmavathi College of Pharmacy	
Publisher:	Science World Publishing	Tamil Nadu-635205	
		Email: insharek@gmail.com	
Received Date:	10 November 2019		
Accepted Date:	18 December 2019		
Published Date:	20 December 2019		

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ABSTRACT

Geriatric patients are increased to 15.2% in 1981 and about 18% in 2001. Age related physiological and pathological changes that might affect handling of response to drug is essential in pharmacokinetic and pharmacodynamics changes. The aim of the study is to evaluate the irrational use of drugs for various diseases among geriatric patients. The study data was conducted in the departments of general medicine, ortho and ophthalmology outpatient unit. Institutional ethical clearance was obtained before conducting study was conducted. Data were collected and analyzed by student 't' test. The result of the study revealed percentage of drugs prescribed as generics were 82.4%, 28% antibiotic and 22% of injections in prescribed. 27.5% were obeying Beers criteria, 36.21% were prescribed from essential drug list and mean while 22.5% prescriptions having drug interaction were found. However our study concludes that suboptimal and inappropriate prescribing practice and need for awareness tools for practitioners regarding detecting drug therapy problems.

KEYWORDS

Drugs, Prescriptions, Polypharmacy, Geriatric, Antibiotic

AIM AND OBJECTIVE

Determination of whether the drugs prescribed for geriatric patients in Govt. Head Quarters Hospital Krishnagiri, is Rational or by using Beer's criteria, WHO essential drug list, OTC drug list, Drug-Drug interaction in geriatric patients through a retrospective study. The aim of the study is to measure the irrational use of drugs for geriatric patients in various diseases.

Primary Objective

Analysis of the rational use of drugs in geriatric patients & also investigate polypharmacy and drug-drug interaction.

Secondary Objective

- Identifying the most frequently prescribed therapeutic groups.
- Determining of the number of drugs in each prescription
- Identifying the drugs which was prescribed in generic names.
- Determining the number of antibiotics prescribed.
- Evaluating whether the drugs were prescribed by using WHO essential drug list & Beer's criteria.
- Evaluating gender & age wise distribution of prescription.

NEED OF THE STUDY

1. Polypharmacy and inappropriate prescriptions are prominent prescribing issues among geriatric patients.
2. The studies on the prescribing patterns seek to monitor, evaluate and suggest modifications in the practitioners prescribing habit, so as to make medical care rational and cost effective.
3. The studies are require for the pattern of inappropriate prescribing and on intervention program to reduce potentially adverse health out come in elderly patient.
4. This studies an attempt to prove that the irrational use of drug in geriatric patients is a common problem at government headquarters hospital krishnagiri.

INTRODUCTION

Geriatric patients can be defined as those who are over 65 years of age. Since the beginning of the twentieth century, they formed only 4.8% of the population, and the number of geriatric patients are increased to 15.2% in 1981 and about 18% in 2001. For optimal drug therapy in the elderly, a knowledge of age-related physiological and pathological changes that might affect handling of and response to drugs is essential. This discusses the age-related pharmacokinetic and pharmacodynamic changes which may affect drug therapy and the general principles of drug usage in the elderly [1-7].

Multiple drug use

- Multiple prescribers
- Comorbidities
- Untreated medical problems, are also affected optimal drug therapy in geriatrics

Rational Drug Use

As per WHO, patients receive medication appropriate to their clinical needs, in doses that meet own individual requirements, for an adequate period of time, and at the lowest cost to them and their community. More than 50% of all medicines worldwide are prescribed , dispensed or sold inappropriately and 50% of patients fail to take them correctly.

Polypharmacy

Polypharmacy is defined by the WHO as "The administration of many dugs at the same time.

METHODOLOGY

Site of Study

This study was conducted in Govt. Head Quarters Hospital, Krishnagiri

Study Department

The study was conducted in the departments of general medicine at male and female geriatric ward , department of ortho, ophthalmology and OP.

Study Design

This was a retrospective study. conducted by using geriatric patient.

Study Plan

A Retrospective study on Rational drug prescribing pattern in geriatric patients by using prescription issued to the patients.

Duration of Study

This study was conducted from the period of 6 months.

Study Population

Inpatient and outpatient with several disease, visiting various departments of Govt. Head Quarters Hospital, Krishnagiri were considered in this study.

Sample Size

150 cases were taken based on inclusion exclusion criteria from Krishnagiri Government Hospital.

Inclusion Criteria

1. Both male and female geriatric in patients
2. Geriatric Outpatients.
3. Post-surgical geriatric patients.

Exclusion Criteria

1. Intensive care unit & surgical patients.
2. ART patients.
3. TB patients

Data Collection Procedure

Data's were collected from the patient prescription of each ward such as current ailments, past medication & medical history etc. were referred and Performa's got filled and daily documentation was done. Follow up of the patient was done till the end of hospital staying. Consultation, prescription, dispensing and administration of drugs to the geriatric patients were observed.

Ethical Consideration

The study received ethical clearance from the institutional ethical committee. Permission to do the study was granted by the Joint Director Medical Officer and Chief Doctor in the department of geriatric patients at Govt. Head Quarters Hospital Krishnagiri.

Data Treatment and Analysis

Data's were collected and analyzed by using Beer's criteria, OTC drug, Drug-drug interaction and WHO essential drug list. The data obtained were entered in Microsoft excel & analyzed. Results were expressed in absolute number, percentages and averages. The data were analyzed <0.05 is considered as significant.

RESULTS

Findings from study		WHO standard per prescription
% of drugs prescribed as generics	82.4% Prescriptions in generic name	100%
% of antibiotic in prescriptions	28% Prescriptions not in range	20-26.8%
% of injections in prescriptions	22% Prescriptions not in range	13.4-24.1%

From The Study	Suggestion
Beers criteria obeying	27.5% Prescriptions obeying Obey 100% Beer criteria For rational prescription
Drugs from WHO essential drug list	36.21% Drugs from WHO essential drug list Prescribe from who essential drug list for rational prescription
Drug-drug interaction	22.5% Prescriptions having drug-drug interaction Drug interactions decreases the action of the drugs , check using interaction checker

CONCLUSION

Prescribing for the elderly is found to be suboptimal and there is occurrence of inappropriate prescribing. This calls for caution on the part of prescribers and pharmacist alike and the need for awareness of tools that can be used by practitioners for detecting drug therapy problems. More studies are required on the pattern of inappropriate

prescribing over a long period of time and on intervention programs to reduce potentially adverse health outcomes in elderly patients most at risk in the area where this study was undertaken.

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