PATTERN OF MEDICAL EMERGENCIES AND PRESCRIPTION PATTERN OF DRUGS IN AN ACCIDENT AND EMERGENCY UNIT AT A TERTIARY CARE TEACHING HOSPITAL IN KANCHEEPURAM DISTRICT, TAMILNADU

JESURUN RS¹, LAVAKUMAR S²

Believers Church Medical College Hospital, St. Thomas Nagar, PO Box-31 Kuttapuzha, Thiruvalla, Kerala, Associate Professor of Pharmacology, Shri Satya Sai Medical College, Tirupur-Guduvancherry Main Road, Ammapetai, Nellikuppam, Kancheepuram. Email: lavakumarsomu@gmail.com

ABSTRACT

Objectives: To study the pattern of medical emergencies and to make an audit of the prescription pattern of drugs utilized in the Accident and emergency department of Shri Satya Sai Medical College and Research Institute. Main Outcome Measures: The data was recorded in a proforma by seeing the Emergency medicine department register everyday morning, for the previous day’s cases. The pattern of medical emergencies were studied, and the prescriptions were analyzed. Results: 115 prescriptions were studied with a total of 250 drugs in the prescription, with an average of 2.20 ± 1.11 drugs per prescription. Predominately males were admitted when compared to the female. Most common route of drug administration was an intravenous injection (66.5%). Brand drug usage (69%) was high compared to generic drug usage (31%). Of all the drugs prescribed 79.8% of the drugs abided to the WHO essential drugs list. Conclusion: The prescription pattern of drugs showed polypharmacy as a concern with possibilities of drug-drug interactions in some of the cases which can be avoided.

Keywords: Shri Satya Sai, Medical emergencies, Prescription pattern.

INTRODUCTION

The Emergency medical services and Trauma care unit are one of the essential departments in the chain of health care provided by the hospitals today. The requirement for efficient emergency medical care delivery using an Emergency Medicine Department and Trauma care Unit is well recognized, and all hospitals should be able to provide basic life support with their Emergency Services to the patients in need [1].

Practicing physicians face challenges frequently in prescribing the correct drugs and starting the right treatment, particularly when it comes to emergency care and wherein the chances of irrational prescriptions and errors might happen[2,3]. It would be better to stick on to prescribe drugs by their generic names as it has been emphasized by the WHO in their essential drug list[4].

A prescription based survey (drug utilization study) is considered to be one of the most effective methods to analyze the prescribing pattern of drugs and prescribing behavior of physicians[5,6]. Monitoring the trends in drug utilization in emergency medicine can provide insight into major health-care problems[7].

This study is focused on the incidence of medical emergencies and prescription pattern of drugs in the emergency medicine department.

MATERIALS AND METHODS

This study was carried out after getting the approval from the Institutional ethics committee (IEC No:2017/335) at Shri Satya Sai Medical College and Research Institute in Kancheepuram District, TamilNadu.

The study was carried out for two weeks.

All patient records, irrespective of age and diagnosis admitted to emergency medicine department were included in the study.

Data regarding the type of emergency whether medical or surgical, drug, form, and route were studied.

From the collected data, prescribing patterns, an average number of drugs per prescription, whether the drug is mentioned in generic form were analyzed.

Descriptive statistics was applied to the collected data

RESULTS

In this study, 115 prescriptions of patients admitted in the emergency medicine department were collected and analyzed. Majority 45 (39.13%) of patients presenting to emergency medicine department were 55-75 years of age followed by 36 (31.3%) patients with 45-54 years of age group. Male: Female ratio was 1.6:1. Majority of the casualty admissions were medical emergencies compared to surgical emergencies. The commonest cause for Casualty admission was found to be cardiovascular disease comprising 49 cases out of 115 followed by central nervous system disorders and respiratory diseases comprising of 18 cases and 26 cases each respectively. Within the cardiovascular diseases admitted (n = 58), acute coronary syndrome (ACS) was the most common diagnosis consisting about 45 (77.5%) followed by Cardiac failure 13 (22.5%)
91% drugs belonged to the national list of essential medicines India. About 67.5% drugs belonged to World Health Organization model list of essential medicines. Fixed-dose combinations comprised 5% of total drugs.

![Fig.02: Pattern of Medicine prescribed among analyzed prescription.](image)

**DISCUSSION**

In our study, cardiovascular cases were a major cause for emergency admission and analgesics, and loop diuretics were the most common drugs used in emergency medical cases. Intravenous route was the most common route of drug administration employed.

In a study conducted by Barot et al., Ondansetron and pantoprazole were the most commonly prescribed drugs in the emergency department. In our study also Pantoprazole and ondansetron were some of the commonly used drugs [8]. This was similar to our study.

In a study done by Sulaiman Sait et al., the prescription pattern of drugs showed polypharmacy as a concern with possibilities of drug-drug interactions in some of the cases which can be avoided. In our study also the problem of Polypharmacy was encountered which was similar to our study[9].

In a study conducted by Cheekavolu et al., NSAIDs, Pantoprazole, and Ondansetron have commonly used emergency drugs. Polypharmacy was also encountered [2].

Drug interactions were also noted during the study due to polypharmacy. For a better quality of patient care, Pharmacist and Pharmacists role in dispensing and counseling is also important[10].

**CONCLUSION**

This study helped us to identify the common drugs employed in emergency medicine department. Cardiovascular cases were the most common cause of medical emergency and admission. The intravenous route, most commonly used the route of drug administration. Loop diuretics, Proton pump inhibitors, and analgesics were the most frequently used drugs in emergency settings. The prescription pattern showed polypharmacy in few cases. Awareness to be given to the treating physicians on polypharmacy and drug-drug interactions. Usage of generic names for drugs instead of brand names to be encouraged.

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**REFERENCES**


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