

Awareness of Fixed Dose Combinations in Medical Undergraduate Students: A Question Based Study



Pharmacology

KEYWORDS: Awareness, Adverse drug reactions, Fixed Dose Combination, Standard protocol, health care professionals.

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ABSTRACT

This study was conducted among the medical students to evaluate the awareness of fixed dose combinations (FDCs). This study was conducted among the 100 students. Students willing to participate in the study were included in the present study. Total 12 questions were given to the individual student and asked to answer the questions. After that papers were collected and analyzed. 100% students are aware about what is FDCs. Maximum number students were seen FDCs in the prescription. Less number of students was aware about the protocol to prescribe the FDCs. Increase the patient's compliance and minimize the ADRs, medication error with FDCs. Students should aware of drug interactions and safety of FDCs. In conclusion, medical students should aware about the FDCs to improve the patient compliance.

Introduction

Fixed Dose Combination of drugs is defined by FDA and USA is "a product composed of any combination of drug and a device or a biological product and a device or a drug and a biological product or a drug, device, and a biological product" [1]. FDCs are the combination of two or more drugs combined and which are made into single dosage form. Selection of drugs based on their chemistry, pharmacokinetics and dynamics. But drug interactions are one of the important aspects in the FDCs [2]. The major advantage of FDCs is reducing the pill taking burden and cost effective also. These FDCs are useful when the dosage of each drug meets the therapeutic effect in the desired number of population. FDCs should show the better effect than single drugs given separately for the treatment of disease. There is increased utilization of FDCs in India from last few years. FDCs have own advantages and disadvantages. When the dosage of two drugs not reached desired effect such FDCs are not useful in the treatment of patients [3, 4]. In addition there can be real clinical benefits when FDCs are used than single drugs. FDCs will be low cost compared to single drugs usage. FDCs are mainly used in the treatment of infections and metabolic disorders. Single drug usage can develop the resistance, but usage of FDCs reduces the development of resistance [5]. Risk and benefit ratio also considered when FDCs prescribed. The present question based study was conducted to evaluate the awareness about FDCs in medical students.

Materials and Methods

Study design: Question based study

Study settings: Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari (Dist), Tamil Nadu.

Procedure

Total 100 medical students were included in the study and their oral consent was taken. Questionnaire contains total 12 questions related to FDCs was given to the individual students.

Statistical analysis

The data was expressed in number and percentage. The percentage was calculated by using Microsoft Excel 2010 worksheet.

Results

All the students were aware about FDCs. 85% students were observed FDCs in the prescription. Less number of students is aware about protocols for prescribing FDCs (Table-1).

Discussion

FDCs are the most commonly used in the various diseases. There should be rationality to prescribe the FDCs in the treatment of diseases. Certain aspects related to drugs should be before

manufacturing FDCs. They are the drugs in the combination should have different pharmacodynamics but pharmacokinetics should be similar. The combined drugs should not increase the toxicity [6]. FDCs are useful when they prepared and prescribed correctly. FDCs make medicine taking easily and increase the patient compliance [7]. These may increase the patient lifespan. Some diseases like HIV, TB, Malaria and other systems/infective diseases can be managed by multiple drug therapy for long period. Time, money, number of tablets intake will make patient non-compliance leads to treatment failure [8]. To overcome this FDCs are drug of choice. FDCs will reduce the economic burden and development of resistance. There is a requirement of increase the awareness in the health care professionals about FDCs uses.

Conclusion

Most of the medical students were aware about FDCs. But still there is a requirement of conferences, CMEs and awareness programs to increase the knowledge about FDCs in the health care professionals.

Table-1: Evaluation of awareness about fixed dose combinations in Medical students

Q. No	Question	Yes		No		Don't	
		Num ber	(%)		(%)	Num ber	(%)
1.	Do you know about Fixed Dose Combinations (FDCs)?	100	100	0	0	0	0
2.	Ever observed Fixed dose combinations (FDCs) in prescription?	85	85.00	10	10.00	5	5.00
3.	Knowledge about Standard protocol for prescribing FDCs	20	20.00	70	70.00	10	10.00
4.	Patient compliance can be improved by using simpler dosage schedule of FDCs	70	70.00	30	30.00	0	00.00
5.	FDCs help to minimize the chances of ADR	80	80.00	10	10.00	10	10.00
6.	FDCs are helpful to reduce inadvertent medication errors	50	50.00	5	5.00	45	45.00
7.	Knowledge about the expiry date of FDCs	90	90.00	0	0.00	10	10.00
8.	FDCs are expensive than single drugs	10	10.00	80	80.00	10	10.00
9.	FDCs have fewer side effects than single drugs	20	10.00	30	30.00	50	50.00
10.	Drug-drug interaction in FDCs may alter therapeutic outcome	50	50.00	20	20.00	30	30.00
11.	Is awareness about FDCs mandatory?	90	90.00	0	00.00	10	10.00
12.	Is it possible to get FDCs without prescription?	60	60.00	30	30.00	10	10.00

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