ISSN: 2320 - 4230

Journal of Drug Discovery and Therapeutics

Available Online at www.jddt.in

CODEN: - JDDTBP (Source: - American Chemical Society)

Volume 5, Issue 9, September: 2017, 08-13

Research Article

SELF MEDICATION AMONGST DENTAL UNDERGRADUATES

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Received 02 Sep. 2017; Accepted 30 Sep. 2017

ABSTRACT

BACKGROUND: Self-medication is a global phenomenon and a potential contributor to human pathogen resistance against several classes of drugs. [1] It is one of the major health concerns worldwide and WHO has laid emphasis on curbing the increasing menace. Numerous studies have been conducted on the topic to find out about the prevalence and practice of self-medication amongst the population but very few have assessed the enormity of the problem amongst dental graduates.

AIM: The study was conducted to analyze the pattern and habit of self-medication amongst junior and senior dental undergraduate students of three dental colleges in and around Chandigarh region.

METHOD: The study was a cross sectional, anonymous and descriptive study. The students were asked to answer the specified questionnaire exploring the use of drug in the last 6 months. The target population was divided into two major groups;

GROUP 1 was the second year students with knowledge about Anatomy, Physiology and Pharmacology but unexposed to the subject of Internal Medicine. The GROUP 2 students were the interns who had sound knowledge about Internal Medicine along with Pharmacology. The questionnaire comprised of 17 questions with yes/no answers. The comparison was made between the two groups using the chi square tests. P values <0.05 were considered statistically significant.

RESULTS: A total of 240 students, both male and female were included in the study. 64% of Group 1 respondents and 65% of Group 2 respondents admitted to using medication on their own. The Group 1 respondents used more of NSAIDS (59%) as compared to the Group 2 respondents (50%). Antibiotics were more frequently consumed by the Group 2 students (70%) in comparison to Group 1 students (49%). Adverse drug reactions were faced more by Group 1 respondents (21%) as a result of their lack of knowledge than Group 2 respondents (11.4%) who are well versed with the subjects of pharmacology.

CONCLUSION: It was observed that the prevalence of self-medication was more amongst the senior group of dental undergraduates, however the practice of the same is unsafe for both the groups and there should be more awareness amongst the dental school students to curtail the habit of self medication.

INTRODUCTION:-

Self-medication is the practice whereby individuals treat their ailments and conditions with medicines, which are approved and available without prescriptions, and which are safe and effective when used as directed. [2]It is a global problem.[3] It is often easier to avoid the cost and hassle of visiting a doctor and use over the counter drugs or prescription medications to alleviate the signs and symptoms of an illness or physical discomfort. There are several harmful consequences associated with this usage of medicines without a proper consultation.[1]

There are several reasons for indulging in this habit such as a fast paced lifestyle, increased access to drugs, readily available medicinal products and due to socioeconomic factors. [3][7] Even the higher educated sections of the society, including the physicians who have fine knowledge about medications are into the habit of self-medication.

Various institutes both in India and abroad have studied this growing trend. Studies in India have reported a high incidence, as shown in a study, where a survey was conducted which showed that 92% of medical students practiced self-medication as compared to 59% of non medical students.[3][7]

Sensible self-medication acts as a boon to the healthcare sector as it helps to reduce the burden on the physicians in certain areas where the illness can be managed easily and helps in providing their services to rural and semi rural areas. It also reduces

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the cost of treatment, and the consultation time for the physician.[3][8] But just like a coin has two sides, the various risks involved with it are wrong self diagnosis, adverse drug reactions, several drug to drug interactions, wrong dosage of the drug, wrong administration of the medicine, drug abuse, resistance to drugs and even wastage of resources.[9]

Self-prescription poses a grave issue which can affect badly both students and their families as it can influence their future. Counseling and care of patients takes a backseat due to the physician's own ill habits and attitude as a result the health provider is not able to guide the patients properly on their health habits. [3][10]

This study was conducted to explore the extent of problem amongst the dental students and analyze the pattern of self-medication amongst senior and junior students and to deduce measures to promote rational and responsible use of drugs.

MATERIAL AND METHODS

This cross sectional, descriptive study was conducted at three teaching dental institutes in and around the city of Chandigarh. The self administered, anonymous questionnaire comprised of 17 questions with yes/no answers and it was thus explained and distributed to the students with their informed oral consent. The questionnaire consisted of five parts and assessed the class of drug used, generic or branded drug used ,any adverse effects encountered, method of obtaining the drug, and their confidence in diagnosing and treating the condition that they may be suffering from.

Two groups of students were used in the study:

GROUP 1: Second year students (n= 100)

GROUP 2: interns (n=140)

They were asked about their drug use for the past 6 months.

OPERATIONAL DEFINITION

According to WHO's definition, self medication is the use of drugs to treat self diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent diseases or symptoms. [5]

Statistical analysis was done using the chi square tests and p values <0.05 were considered to be significant.

RESULTS

A total of 240 students from three different institutions in and around Chandigarh participated in the study and completed the questionnaire. The age range of Group 1 students was from 18-20 years while Group 2 comprised of students of the age range 21-23 years.

Group 1 consisted of 75% (n= 75) of females and Group 2 included 82.9% (n=116) females. The practice of self-medication was found to be of almost similar trend with 64% (n=64) Group 1 students and 65% (91) of Group 2 students agreeing for the same. In Group 1, 78% (n=78) and in Group 2, 77% (n= 108) respondents agreed to have bought medicines without any prescription and while 85% (n=85) of second year students bought them from the local pharmacy about 86.4% (n=121) bought the drugs from a local chemist.

31% of Group 1 students and 22.1% of Group 2 students reported using the same prescription as their family members.

Based on the type of medication used, the Group 2 students preferred using branded medicines 70% (n=98) as compared to 69% (n=69) of Group 1 students. Generic drugs were chosen more so equally by both the groups; Group 1 being at slightly higher 28% (n= 28) and Group 2 being at 27.9% (n=39).

The respondents used various classes of drugs differently and it was found that a significant difference was seen between both the groups in the overall usage of medicines.

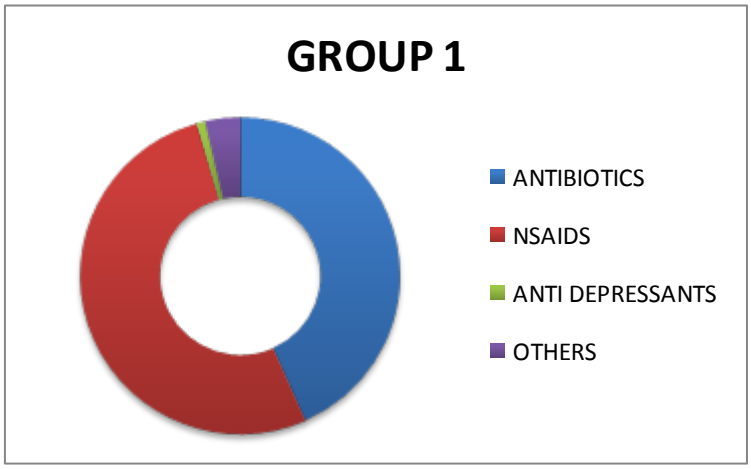
Antibiotics (37%vs 47.1), NSAIDS (46% vs. 25.7%) and antibiotics in combination with NSAIDS (12% vs. 20.7%) were the commonly used class of drugs with a significant difference in the usage of antibiotics.

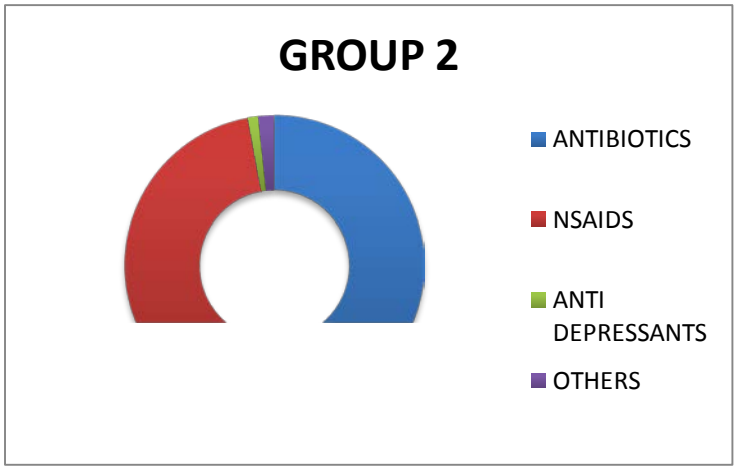
Table 1:

Sr. No.	CLASS OF DRUG	GROUP1 N %	GROUP2 N %	P VALUE
1	Antibiotics	37 (37%)	66 (47.1%)	S
2	Antibiotics, NSAIDS	12 (12%)	29 (20.7%)	NS
3	Antibiotics, NSAIDS, antipyretics	0 (0%)	2 (1.4%)	NS
4	Anti-depressants	1 (1%)	2 (1.4%)	NS
5	NSAIDS	46 (46%)	36(25.7%)	NS
6	others	1 (1%)	3 (2.1%)	NS

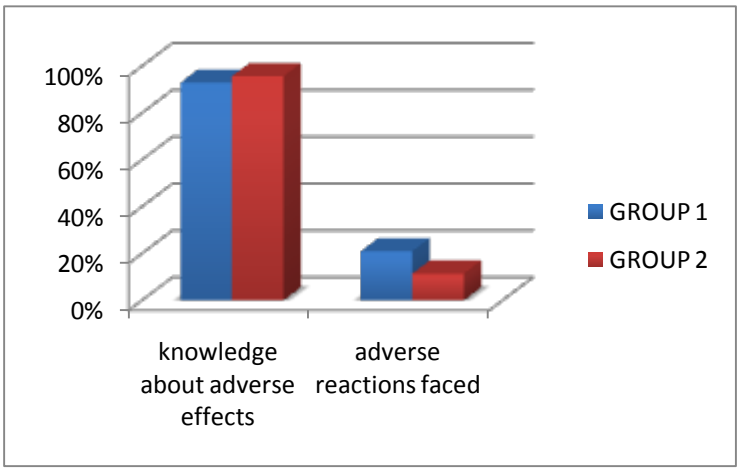
S = SIGNIFICANT, NS = NOT SIGNIFICANT.
P value <0.05 was considered statistically significant.

Drug classes most frequently used for self-medication in both the groups were antibiotics, NSAIDS, anti-depressants, anti – pyretic and combination of these. Antibiotics were used SIGNIFICANTLY HIGHER by the Group 2 students (70%) as compared to the Group 1 students (49%), which were also seen to be statistically significant. NSAIDS such as paracetamol and ibuprofen were more commonly used by Group 1 students (59%) in comparison to Group 2 students (50%) though this was not found to be statistically significant.

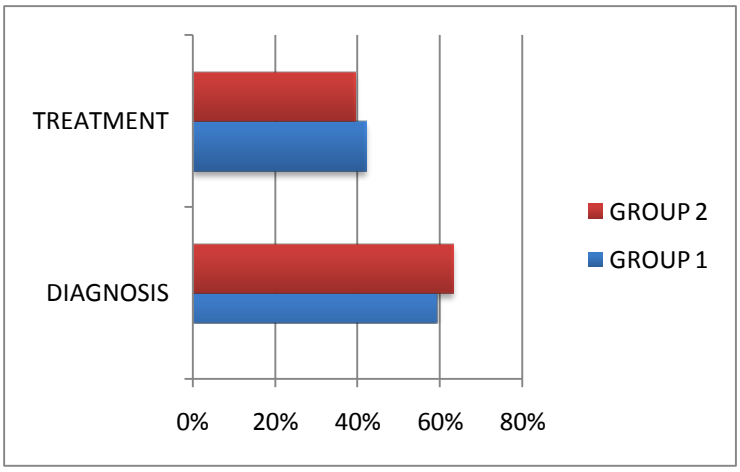




It was observed that both the Groups of students had a sound knowledge about drug interactions (94%vs 95%) with slightly higher percentage of Group 2 students more aware about it.
It was also noticed that the Group 2 students who had more information about the adverse effects of the drug (95.7% N =134 vs. 93% N=93), also encountered lesser adverse reactions of self medication (11.4% N=16 vs. 21% N=21) in comparison to Group 1 respondents, which was SIGNIFICANT.



Amongst Group 1 respondents, only 57% (N=57) students read the leaflet of drug used without prescription to know about its direction and dosage of usage whereas an Group 2 respondents, 68.6% (N= 96) read the leaflets.
Almost significant difference was seen between the groups storing medicine at home; where Group 1 stored slightly higher 90% (N=90) and Group 2 at 83.6% (N=117).
Lastly it was analyzed that the Group 2 students felt more confident to diagnose a condition they may be suffering from 62.9% (N=88) as compared to Group 1 students 59% (N=59) who felt more confident in treating themselves for the condition they may be suffering from (42% vs. 39.3%).



DISCUSSION

From the results above mentioned, it is clear that there is a high prevalence of self medication observed amongst the dental undergraduates. Worldwide, it has been studied that in some areas such as Ethiopia the prevalence of self-medication is as low as 38.2% and in some areas like Palestine, it is as higher as 98%[3][7]. It has been seen that the habit of self – medication increases with the academic year of study [11-13]. Our study confirms this observation as the Group 2 students who were in their last year of the course showed increased trend in self-medication. Though in a study by da Silva and Sontakke et al, there was no such trend related to practice of self-medication and the year of study. [14,15]

It is commonly seen that the habit of self-medication is related to various factors like socioeconomic factors, easy access to drugs and availability of medicines. Mostly it has been observed that the source of drugs used for self-medication is the local pharmacy or a family doctor. The students normally use the same prescription given to their family members or pick up medicines without a prescription or consulting a physician.

Studies have shown the prevalence of self-medication with antibiotics to be more in China (47.8%)[16] as compared to (21.2%) in north India. [3][17]In congruence with several other studies, it has been

rightly observed in this study too that the most commonly used classes of drugs are antibiotics, NSAIDS, analgesics, and anti pyretic. Banerjee et al stated in his study about the more frequent use of antibiotics followed by NSAIDS and analgesics which our study reaffirms [3][18]. In a study in Iran, 76.6% students used analgesics whereas according to our study about 50% students consumed NSAIDS. [19]

Even in the case of adverse effects, it was seen that the senior students had more information about the adverse effects, being well versed with the subjects of pharmacology and internal medicine in comparison to the junior students who had less knowledge about pharmacology and adverse effects of drugs and thus encountered more adverse reactions. Contrary to our expectations, the junior students were found to be using the drugs in proper dosage.

The main sources of medication were those stored at home because these drugs aremost easily accessible and readily available and about 80% of students in both the groups used home pharmacy.[3][14]

Although both the groups had significant knowledge about the harmful effects of self-medication, still this menace is more prevalent amongst the medical field graduates. Through this study, it has been emphasized that there is an increasing rate of self-medication seen in the developing countries. This further makes us brood on the fact that how educational intervention along with multimedia programs need to be implemented in order to curb such prevalence. In a country like India, where you find a doctor in every household even without any medical background, it becomes even more necessary to spread the word about the various ill effects of using the OTC drugs without any prescription from a registered practitioner. The need of the hour is to formulate strict and stringent government regulations and the successful implementation of the same. Pharmacy departments should keep a close tab on the matter and even guide the same to several local pharmacies too so that the easy access to drugs without a prescription can be avoided.

This study has certain limitations like smaller sample size, region specific, and mutual influence amongst students as well. Moreover, it did not include students with chronic illnesses.

CONCLUSION

Self-medication is not about lessening the burden or compensating what a physician will do. As the study shows, it is more prevalent amongst the dental undergraduates but the habit can be observed even in the general population. Thus, the need of the hour is to formulate several measures in order to curb this menace.

These measures can be undertaken by:

1. Regulatory changes
2. Health awareness and population education

The regulatory changes include formulating strict and stringent laws, which need to be implemented successfully. Scheduled drugs, which are commonly available in India as OTC drugs, need to be abolished. Just like in developed countries, the accountability of pharmacists should be made firm. Even the chemists need to be sensitized and informed about the fact that they have limited knowledge and without taking proper case history they can cause more complication.

In the health education means, the government has tried to make people aware about self-medicationthrough various campaigns but no concrete steps have been undertaken as such in this field. Irrespective of the fact that a person is from medicine background or not, he needs to be sensitized regarding this habit.

In conclusion, more studies and researches need to be done about this habit in the population in order to change perceptions.

ACKNOWLEDGEMENTS

The authors want to extend their wholehearted acknowledgement to all the students and friends who participated in the study. A special word of gratitude to Dr. Ikreet Singh Bal, Deptt. of Public Health Dentistry and Dr. SuruchiAditya, Deptt. of Pharmacology from Dr. Harvansh Singh Judge Institute of Dental Sciences and Hospital, Chandigarh for their constant support and abled guidance for this study.

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