

SELF MEDICATION PRACTICES IN DENTAL PATIENTS IN RURAL GUJARAT, INDIA

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ABSTRACT

Background & Objective: Self medication in dentistry is major problem which results in Antimicrobial drug resistance. The objective of this study was to determine the prevalence of self-medication and to determine factors associated with these practices among dental out patients presenting at a post graduate dental teaching institute in rural Gujarat, India.

Materials & methods: A cross sectional survey was conducted in Ahmedabad rural, Gujarat, India from September 2013 to March 2014 using a self-administered pre-tested structured questionnaire written in local language. The questionnaire consisted of 15 questions regarding Demographic characteristics and Specific research. Statistical relationship between the variables was analyzed using the Chi-square test ($p < 0.05$).

Results: All the respondents admitted about self medication practice. Most common reasons were to have temporary relief and saving time. Majority used the old prescription of the doctor for reference. Very few knew about the specific dosage, adverse effects and contra indications of the medication.

Conclusion: People are taking medication without consultation of dentist with almost no knowledge about drug dosage and contra indications. This trend has to be stopped to prevent drug over dose and specifically drug resistance in case of antibiotics.

KEYWORDS: Self medication; dental patients; India

INTRODUCTION

Self medication can be defined as the use of drugs to treat self diagnosed disorders or symptoms or the intermittent or continued use of prescribed drug for chronic or recurrent disease or

symptoms.^[1] This includes acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using leftover medicines stored at home.^[2] In most societies a person suffering from physical discomfort or emotional distress has a number of ways of helping himself or seeking help from other people.^[3] A major problem of self medication with antimicrobials is the emergence of resistance of human pathogens. Antimicrobial resistance is a current problem world-wide particularly in developing countries, where antibiotics are often available without prescription.^[4] Benefits of self medications include decreased potential frequency of physician visits, increased patient autonomy and reduced costs. However these alternative medical practices lack clinical evaluation of the condition by a trained medical professional, which could result in missed diagnosis, delays of appropriate effective treatments, adverse drug interactions and increased risk of drug toxicity as result of under or overdosing.^[5,6] The adverse effects of self medication cannot be over-emphasized. However some people may engage in the practice of self medication due to ignorance, poverty and in availability of health facilities.^[3] Toothache is very agonizing experience and those who experience pulpalgia seek relief through medical counselling, complementary therapies, self-medication or application of clove oil, tobacco and tablets Aspirin.^[7,8] Other causes of self medication include poor socioeconomic status, high cost of modern medical treatments and difficulties that often arise in accessing modern health care, easy availability of the drugs over the counter, unchecked sales, economic & time constraints, influence of family & friends, media

Table 1: Demographic characteristics of the study participants

| | | N (%) |
|-----------------------|---------------------|------------|
| Gender | Male | 113 (55.6) |
| | Female | 90 (44.3) |
| Marital status | Married | 173 (85.2) |
| | Unmarried | 30 (14.7) |
| Religion | Hindu | 163 (80.2) |
| | Muslim | 30 (15.7) |
| | Others | 10 (2.3) |
| Qualification | Primary Education | 121 (59.3) |
| | Graduates | 40 (19.6) |
| | No formal education | 30 (14.7) |
| | Postgraduate | 12 (5.9) |

Table 2: Self-medication practice among the study participants

| Drug | N (%) |
|---|------------|
| Analgesic | 175 (86.2) |
| Multivitamins | 16 (7.8) |
| Antibiotic | 14 (6.9) |
| Combination of antibiotic and analgesic | 14 (6.9) |
| Combination of analgesic and Multi-Vitamins | 04 (1.9) |

Table 3: Reasons for taking self medication among the participants

| Reasons | N (%) |
|---------------------------|-----------|
| Temporary relief | 88 (43.1) |
| Saving time | 85 (41.7) |
| Fear to go to the dentist | 63 (30.9) |
| Financial constraint | 44 (21.6) |
| Distance from home | 35 (17.2) |
| Unavailability of dentist | 27 (13.2) |
| Easy availability of OTC | 10 (4.9) |

campaign by pharmaceuticals, lack of awareness, lack of good primary health care system and false claims by road side unqualified persons.^[7-9] Various previous studies have shown that self medication practices are more common in women and in those; who live alone, have a lower socioeconomic status, have more chronic ailments, have psychiatric conditions, are of younger age and in students.^[9-12] The aim of this study was to determine the prevalence of self-medication and to determine factors associated with these practices among dental out patients presenting at a post graduate dental teaching Institute in rural Gujarat, India.

MATERIALS AND METHODS

A cross sectional survey was conducted in Ahmedabad rural, Gujarat, India from September 2013 to March 2014. The study population consisted of the dental patients coming to the OPD of the Institute in Ahmedabad city. Before the commencement of the study, ethical approval was taken from ethical committee of College of Dental Sciences and Research Centre. Each patient was informed about this study and written informed consent was obtained from those who were willing to participate. A pilot survey was done before the start of the study and necessary changes in the questionnaire were made

accordingly. A self-administered structured questionnaire written in local language (Gujarati) validated through pre-tested survey was used for getting information. The questionnaire consisted of 15 questions under following sections: (1) Demographic questions including age, gender, marital status, religion. (2) Specific research questions elicited participants' response about self care medications. Data obtained were analyzed with the SPSS version 16. Frequency tables were generated and statistical relationship between the variables was analyzed using the Chi-square test. Statistical significance was set at $P < 0.05$.

RESULTS

There were two hundred and three respondents, aged between 16-80 years. There were 113 males (55.6%) and 90 females (44.3%). One hundred and seventy three (85.2%) were married while thirty (14.7%) were single. One hundred and sixty three (80.2%) were Hindus and thirty (15.7%) were Muslims. Twelve (5.9%) of the respondents were post-graduates, forty (19.6%) were graduates, 121 (59.3%) had primary education while thirty (14.7%) had no formal education (Table 1). All the respondents admitted about self medication practice. The respondents used an array of drugs either singly or in combination. Of all the drugs used singly, the majority 86.2% ($n=175$) used analgesics followed by multi-vitamins 7.8% ($n=16$) and antibiotics 6.9% ($n=14$), while for drug combinations, 6.9% ($n=14$) used analgesics+ antibiotics, 1.9% ($n=4$) used analgesic+ multi-vitamins combination without a doctor's prescription (Table 2). Eighty eight (43.1%) respondents attributed the reason for self medication was to have temporary relief. The other reasons cited were saving time (41.7%), fear to go to dentist (30.9%), financial constraint (21.6%), distance to the services available (17.2%), unavailability of dentist (13.2%) and easy availability of over the counter drugs (4.9%) (Table 3). When asked about source of information of specific medications, majority (52.9%) had taken by referring to the old prescription of the doctor, while others were either advised to take medications by friends/ family members/ medical store (28.6%) or by seeing advertisements (11.3%). Very few knew about the specific dosage, adverse effects and contra indications of the medication.

DISCUSSION

Although it is true that self medication can help treat minor ailments that do not require medical consultation and hence reduce the pressure on medical services particularly in the underprivileged countries with limited health care resources,^[13] the availability of the more complex drugs groups such as antibiotics without prescriptions is a source of great concern.^[11] Moreover, the practice of self medication often has many adverse effects and can lead to many problems, including the global emergence of Multi-Drug Resistant pathogens,^[14] drug dependence and addiction,^[15] masking of malignant and potentially fatal diseases,^[16] drug interactions^[17] and tragedies relating to the side effect profile of specific drugs.^[18,19] Although Ahmadabad is a Metropolitan city with various dental establishments including teaching hospitals, multispecialty dental hospitals and large number of private dental clinics, in our study which was based in rural area, all the participants had practiced self medication which is indeed alarming in view of the possible hazards associated with such practice. It was disturbing to consider that the proportion was higher than general out patients,^[3] high school students^[20] and patients taking antibiotics or anti malarial drugs.^[21,22] The types of drugs used varied depending on the respondents' perception of efficacy of a drug for their medical condition. It is understandable that a significant proportion of the respondents used analgesics either alone or in combination with other drugs without prescription as common analgesics can be bought without prescription in the community. Most respondents attributed the reason for self medication to have temporary relief ($n=88$, 43.1%) and time constraint ($n=85$, 41.7%). Although self medication will give intermediate relief and saves time, this practice could lead to development of antimicrobial resistance when antibiotics are the agents utilized. Only few of the respondents attributed the reason for self medication to unavailability of dentist. Very few participants cited financial constraint and easy availability of OTC drugs for self medication. This finding is in contrast to findings from Awad and co workers^[21] in Sudan where the main reason for self medication was financial constraint. In this study most participants had taken medicines by

referring old prescription of the doctor given regarding similar or related problem. This is comparable to the study conducted on Pakistani mothers, where good past experience (61.3%) with the medicine was the main reason for self-medication.^[19] Attitudes like these are indeed unfavourable and show that people, even the well educated youth are unaware of the gravity of this situation. They had no idea about exact effects, side effects or specific dosage. This was in variance with a study conducted on University students of Turkey where it was found that even though 89% of students knew that it is wrong to take antibiotics without consulting a doctor, 45% of them still indulged in this activity.^[23] If people were aware about the details of medicines including its contraindications, then people would avoid taking medicines without doctors' consultation. We are of the opinion that if the participants knew exactly how devastating self medication could be; the prevalence rates would be much lower.^[19] Only few participants (6.9%) had taken antibiotics without consulting doctor which was very less when compared to other studies conducted in Pakistan,^[19] and on students in Croatia^[13] where 35% and 38% people respectively took antibiotics without consulting a doctor. A serious issue associated with this is that of antibiotic resistance developing over time with such indiscriminate use. In our study gender comparison was not possible as all participants were found taking medication by self. The study of Awad *et al.*,^[22] in Sudan showed females were more likely to be involved in the use of self-prescribed antibiotics. However Mustafa *et al.*,^[24] in Turkey found that males were more likely to use self-prescribed antibiotics than females. It is generally believed that women are more health conscious and have better health practices than men^[25] but they also have lower pain threshold^[26] and are more likely to be scared of dental procedures, and this may account for significantly higher percentage of females involved in it. Similarly comparison based on education and economic status was also not possible. but there were studies reported differences according to gender, education and economic status for self medication practices.^[9,21,27,28] It is possible that educated persons have a vague idea of their dental problems and an idea of what drugs to use. It might cause some serious issues regarding drug

resistance and adverse effects as they might not be aware of appropriate dosing and drug interactions. There are a few limitations of this study, the first is that the questionnaire was a self reported one and this could have led to over reporting of the self medication practices which is even more distressing. Also this study was Institutional study so people with dental problems were included in it. It might have led to higher percentage of self medication prevalence. A more comprehensive study with larger section of general population needs to be carried out where these results could be used as baseline data. We recommend that comprehensive approach including education and awareness about hazards of self-medication, strict norms for pharmacy shops and strict implementation of these norms to reduce prevalence of self medication.

CONCLUSION

In our study, all the respondents had self medication practice. While majority had taken it for temporary relief or due to insufficient time, very few knew about drug dosage and contra indications. This trend has to be stopped to prevent drug over dose and specifically drug resistance in case of antibiotics.

CONFLICT OF INTEREST & SOURCE OF FUNDING

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