Practice of Self Medication for Dental Ailments among Patients Attending Dental OPDs in Karachi, Pakistan

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Abstract

To determine the prevalence of self-medication for dental problems and its associated factors among patients visiting dental outpatient departments (OPDs) of Karachi Medical and Dental College (KMDC) and Liaquat College of Medicine and Dentistry (LCMD). This includes the commonly used drugs, their duration, dosage and side effects, also to determine the reasons for self-medication and to educate them about its consequences.

Self-medication may be defined as the inappropriate use of drugs without doctor’s prescription for previous or self-diagnosed diseases. It is a common practice among dental patients all over the world.

A cross sectional survey was carried out among patients attending the dental outpatient departments of LCMD and KMDC, Karachi, Pakistan from June 2017 to October 2017. The non-probability convenient sampling technique was used and data was stored and analysed using IBM-SPPS version 23.0. The survey was carried out among 160 patients attending dental OPDs, out of which 69.9% patients acquiesced that they are involved in self-medication practices.

Commonly consumed drugs for self-medication were pain killers (analgesics) in females 78% and in males 63.3% and antibiotics 6.7% in males and 5.0% in females. Survey showed that 51.4% admitted that they have had adverse effects while taking self-medications. Comparison between pre and post counselling regarding the perception of self-medication was also done. Before counselling (20.9%) patients considered it to be a good practice while (33.3%) disagreed. Although after counselling, there was an increase of up to 47% in patients considering self-medication as an unacceptable form of treatment.

There is a high prevalence of self-medication practice for dental problems among patients attending dental OPDS of KMDC and LCMD despite having awareness of its adverse effects. With higher frequencies in females but practice is common in both upper and lower social classes. Analgesics, usually Panadol are most commonly consumed.

Keywords: Self-medication; Dental problems; Antibiotics; Analgesics

Aim

This study was conducted among dental patients of Karachi, Pakistan to determine and spread awareness about the prevalence of self-medication for dental problems and its associated factors including the commonly used drugs, duration, dosage and side effects, reasons for such practices, the knowledge, awareness and attitude towards self-medication practice among dental patients of Karachi, Pakistan.

Introduction

Self-medication is a common practice for the treatment of dental problems among individuals almost everywhere in the world. Self-medication may be defined as the inappropriate use of drugs and home remedies without doctor’s prescription for the treatment of acute, chronic or recurrent self-diagnosed diseases or symptoms of diseases[1,2].

WHO has encouraged the responsible practice of self-medication in rural and remote areas for effective and quick relief of some common diseases where health care personnel or services are understaffed, deficient or inaccessible [3]. This, responsible self-medication practice may help to reduce the cost of treatment, travelling time as well as doctor’s consultation time [4].

The medications that are usually used for self-medication are termed as “non-prescription” or “over the counter” (OTC) drugs. These drugs must be administered on the basis of authentic medical information [5].

While reviewing different literatures it was found that the prevalence of self-medication is quite high despite the awareness of the adverse effects [2]. A study conducted in non-medical universities of Karachi, Pakistan showed self-medication practice in 50.1% students and 47% reported self-medication with antibiotics [2].

From another study conducted among OPD patients visiting Fatima Medical Hospital, Karachi 57% patients were practicing self-medication [6]. Prevalence of self-medication was found to be 56.8% in males and 43.2% in females in a study in India [7] while another study in India showed 38.03% males and 61.97% females practicing self-medication [8]. Studies in Nigeria showed 80.6% people involved in self-medication [1].

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Results

Out of the 160 patients 69.9% patients acquiesced that they are practicing self-medication to treat their dental problems. Among the 114 (69.9%) self-medicates, 75 (65.8%) were females and 39 (34.2%) were males (Table 1).

Figure 1 shows that the most commonly consumed drugs for self-medication were pain killers (analgesics) in females 78% and in males 63.3% and antibiotics 6.7% in males and 5.0% in females. In analgesics Panadol with 37% is the most favoured drug. Other commonly consumed analgesic by 30% is Ansaïd/Brufen (Figure 2). Figure 2 shows that in antibiotics Augmentin/Amoxicil with 15% is the most elected drug for dental treatment by one's self.

Reasons for practicing the self-medication include convenience 57%, cost saving 14.3% and lack of trust in prescribing doctor 6.1% as illustrated in Table 2.

In Table 3, adverse effects of taking self-medication were discussed, 51.4% agreed to have adverse effects among which 26.4% complaint of nausea, 10.8% diarrhoea, vomiting 8.1% while 48.6% experienced no adverse effects.

Figure 3 demonstrates that patients usually stopped taking antibiotics once symptoms disappeared 38.5% or after completion of course 29.7% or few days after the recovery of symptoms 17.6%.

Selection criteria of medicines for self-medication practice was based on either one’s own experience 31.3% or previous doctor’s prescription 25.8%, opinion of family members 22.1%, or recommendation by community pharmacist 8.0% as shown in Figure 4.

Income status was not significantly associated with self-medication. Patients with monthly income of Rs. 10,000-30,000 claimed that cost saving (38.9%), and convenience (25.0%) as a reason for self-medication, while patients with monthly income of more than Rs. 50,000 claimed lack of trust in prescribing doctor (50.0%) as a reason of self-medication (Table 4).

Figure 5 shows the comparison between pre and post counselling regarding the perception of self-medication in patients. Pre-counselling patients considered self-medication as a good practice (20.9%), acceptable practice (45.8%) and not acceptable practice (33.3%) whereas patients counselled regarding self-medication and later followed up by a post counselling questionnaire.

Table 1: Association of practices of self-medication with gender.

| Variables                                      | Gender | P-value |
|------------------------------------------------|--------|---------|
|                                                | Male   | Female  |   |
| Have you ever treated yourself (self-medicated) | Yes    | 39      | 54.3 |
| with any medicine?                             | no     | 21      | 37.2 |
|                                                |        | 34.2    | 65.8 |
|                                                |        | 75      | 68.1 |

Table 1: Association of practices of self-medication with gender.

Figure 1: Association of practices of self-medication with gender.
Figure 2: The frequently elected drugs.

Table 2: Practice and rationale of self-medication among patients for dental problems.

| Characteristics                                      | n   | %  |
|------------------------------------------------------|-----|-----|
| Have you ever treated yourself (self-medicated) with any medicine? | Yes | 114 | 69.9 |
|                                                      | No  | 46  | 28.2 |

| What was (were) your reason(s) of self-medication with medicines? | Cost Saving | Convenience | Lack Of Trust In Prescribing Doctor | Others |
|------------------------------------------------------------------|------------|-------------|-----------------------------------|--------|
|                                                                  | 21         | 84          | 9                                 | 33     |
|                                                                  | 14.3       | 57.1        | 6.1                               | 22.4   |

| Your selection of medicines was based on which aspect?           | Recommendation by community pharmacist | Opinion of family members | Opinion of friends | My own experience | Previous doctor prescription |
|----------------------------------------------------------------|--------------------------------------|--------------------------|-------------------|------------------|---------------------------|
|                                                                | 13                                   | 36                       | 10                | 51               | 42                        |
|                                                                | 8.0                                  | 22.1                     | 6.1               | 31.3             | 25.8                      |

Table 3: Attitude and awareness of self-medication for dental problems.

| Characteristics | n   | %  |
|-----------------|-----|-----|
| Have you ever had any adverse reaction when you took medicines for self-medication? | Nausea | 39 | 26.4 |
|                                                               | Vomiting | 12 | 8.1  |
|                                                               | Diarrhoea | 16 | 10.8 |
|                                                               | Rash      | 5  | 3.4  |
|                                                               | Drug Resistance | 4 | 2.7  |
|                                                               | No        | 72 | 48.6 |

Discussion

Our study assessed various factors that could be associated with the use of self-medication among the dental patients in Karachi, Pakistan.

From our study it was found, that self-medication is a common practice in our society. The prevalence of self-medication practice varies between males and females. Results from the data collected suggest that females are more indulged in practicing self-medication (65.8%) as compared to males (34.2%).

The reason for higher percentage in females is due to either lower threshold towards pain or to the fact that females have greater fear towards dental treatment as compared to males. This finding is consistent with other studies which show greater prevalence of self-medication among females [12]. However, opposite finding was found in a study conducted in Nigeria in which there was male predominance over female gender.

However there is an association between self-medication practice and socio-economic status. In lower class the people have preference of self-medication because of cost effectiveness and convenience while the factor involved in the practice of self-medication in upper socio-economic class is due to lack of trust in doctors.

The data collected from our survey showed that analgesics are more commonly used for self-medication than antibiotics in both genders. The same result was found in a study conducted in Cameroon [13]. This is due to the fact that toothache is found to be the most common dental problem. The consumption of analgesics in males is less (63.3%) than females (78.0%). The use of antibiotics is less than that of analgesics and the male to female ratio is found to be more in males (6.7%) as compared to females (5.0).

Among the list of drugs commonly used in self-medication practice, Panadol is the most common non-doctor prescribed drug (37%), followed by Ansaid /Brufen (30%) while Synflex is found to have a low figure of only 13% in our study population.

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After asking further questions about the course of antibiotics, the respondents practicing self-medication for dental problems showed that they usually stop taking antibiotics mainly after the symptoms disappeared (38.5%), some patients (29.7%) completed their antibiotic course while few patients (17.6%) stopped taking antibiotics a few days after recovery.

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Our study also comprises of a Post-Counselling section. After counselling the patients, educating them and making them aware of the dangers of self-medication, the difference in the responses among the patients of our study survey was found to be quite high.

Before counselling, 29% patients of our study population considered self-medication as a good practice while according to 33.3% patients it was not considered as an acceptable practice. Comparing the findings after counselling 15.3% patients considered self-medication as a good practice while 41.7% patients considered self-medication to be an unacceptable practice. From these results it is found that by proper counselling of an individual this practice can be minimized effectively.

The results of our survey indicate that the selection criteria of non-doctors prescribed medication is basically based on one's own experience of medications taken for previous dental problems in 31.3% population while 25.8% people select medicines from the previous experience of medications taken for previous dental problems in 31.3% population while 25.8% people select medicines from the previous experience of medications taken for previous dental problems in 31.3% population.

Regarding the adverse effects of self-medication the majority of respondents (51.4%) have experienced some adverse reactions when taking self-prescribed medicines in which 26.4% had nausea and 10.8% had diarrhoea as an adverse effect, while 48.6% never had any adverse reaction in practicing self-medication.

Dental services need to be made more accessible and affordable to the general population. Public education programs need to be intensified and government should take steps for enforcing and implementing laws about prescribed medication which can decrease the rate of self-medication. Ideally antibiotics need to be regulated on a "sold on prescription only" basis.

**Conclusion**

From the above discussion, the study concluded that there is a high prevalence of self-medication for dental problems practice among the patients attending OPDs of KMDC and LCMD, despite being aware of the adverse effects. The majority of respondents medicate themselves with antibiotics or other drugs. Both upper and lower SEC is indulged in self-medication practice. After counselling, the same patients admit that self-medication is not a good practice.

**Recommendation**

There is a need for enforce of educative and preventive programs to minimize the practice of self-medication. The government should take measures to stop or at least decline the rate of self-medication.

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**Table 4:** Relationship between socio economic status and self-medication practice.

| Characteristics | Monthly Income | P-value |
|-----------------|----------------|---------|
|                 | ≤ 10,000 Rs   | 10,000-30,000 Rs | 30,000-50,000 Rs | ≥ 50,000 Rs |
|                 | n  | %  | n  | %  | n  | %  | n  | %  | n  | %  |
| Have you ever treated yourself (self-medicated) with any medicine? | 34 | 69.4 | 26 | 76.5 | 10 | 66.7 | 23 | 79.3 | 0.69 |
| no | 15 | 30.6 | 8 | 23.5 | 5 | 33.3 | 6 | 20.7 |
| What was (were) your reason(s) of Self-medication with Medicines? | | | | | | | | | |
| cost saving | 7 | 38.9 | 7 | 38.9 | 3 | 16.7 | 1 | 5.6 |
| convenience | 28 | 41.2 | 17 | 25.0 | 6 | 8.8 | 17 | 25.0 |
| lack of trust in prescribing doctor | 2 | 33.3 | 1 | 16.7 | 0 | 0.0 | 3 | 50.0 |
| Other | 8 | 29.6 | 7 | 25.9 | 6 | 22.2 | 6 | 22.2 |

**Figure 5:** Comparison of participant's perception of self-medication before and after counselling.
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