Evaluation of knowledge regarding adverse drug reaction and its reporting among dentists in GDC, Hyderabad - A KAP study

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Abstract- Adverse drug reactions was defined by WHO as a response of a drug which is noxious and unintended and which occurs at doses normally used in man for prophylaxis, diagnosis or therapy of a disease or for the modification of physiological function. Detection, recording & reporting of ADR has become vital & health care professionals should be encouraged to execute ADR reporting to ensure safer use of medication Many K A P studies about ADR were conducted among medical professionals & few among dental professionals. Hence current study was conducted to assess K A P of adverse drug reactions and its reporting among dentists.

AIM: The aim of study is to evaluate knowledge and attitude of dentists about ADR & its reporting.

OBJECTIVE: To measure awareness about ADR among dentists & to determine reasons for ADR underreporting.

METHODS & MATERIALS: In present study, a self-administered questionnaire was used to measure the awareness level about ADR & its reporting among dental practitioners in GDC&H. In this study 96 dentists were involved who answered predesigned questionnaire prepared based on previous studies.

RESULT: It was noticed that knowledge & awareness about ADR was moderate & ADR reporting was minimal.

CONCLUSION: we conclude that 96 dentists in our study have satisfactory knowledge about ADR and its reporting. They have good attitude towards practice of reporting ADR, but unable to report ADR due to lack of knowledge and training OD ADR reporting but almost every dentist was willing to participate in ADR reporting.

I. INTRODUCTION

Adverse drug reactions was defined by WHO as a response of a drug which is noxious and unintended and which occurs at doses normally used in man for prophylaxis, diagnosis or therapy of a disease or for the modification of physiological function. According to barkar there are 3 possible reactions of drug, they are the one you want, the one you don’t want and the one you don’t know. Adverse reactions vary from mild to moderate severity, sometimes they are very serious. Every year 5-20% of cases hospitalized are due to ADR’S. Around 4% of patients have fatal ADR’S. According to UMC (Uppsala monitoring Centre) only 6-10% of ADR’S are reported, this is because of lack of knowledge & awareness regarding detection, communication & spontaneous monitoring of ADR among healthcare professionals including physicians, surgeons, dentists, and nurses & including pharmacists. It is important for health care professionals to know how to report & where to report on ADR. Dentists use various drugs for treatment of different oral dental & maxillofacial conditions; most commonly used drugs are NSAIDS, analgesics, antibiotics & antacids. Other drugs include steroids, multivitamins & anti epileptics for emergencies are also used. IV drugs like lignocaine, sodium tetradecyl. These drugs have been reported to have ADR like headache, tinnitus & severe anaphylactic shock. Though they are very rare. They were found to be fatal in 3.67% cases. Hence reporting of these unintended ADR’s become very important not only for future references & development of better medicine but also to avoid morbidity (or) mortality of patients. So this study is intended to evaluate knowledge regarding ADR among dentists.

II. MATERIALS AND METHODS:

STUDY DESIGN
This study was conducted at GDCH, a dental hospital in Hyderabad, Telangana, India. The study was questionnaire based study. The study participants consisted of dentists who gave their informed consent and who were working in hospital during the study period. Participants include both senior and junior doctors. The questionnaire was designed from previous studies which is as follows:

<table>
<thead>
<tr>
<th>SL No</th>
<th>K A P Questionnaire</th>
<th>Dentists Response N=96 , n=%</th>
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1. **What is adverse drug reaction?**
   - A. Unintentional Reactions caused due to Normal dosage of drugs given to a person. 47(48.9%)
   - B. Unintentional Reactions caused due to Over dosage of drugs given to a person. 32(33.3%)
   - C. Reactions caused due to drug Abuse. 15(15.6%)
   - D. None 0

2. **What is Adverse drug reaction reporting?**
   - A. HealthCare Professionals Reporting any suspected ADR to Regulatory body or manufacturer 22(22.9%)
   - B. Manufacturer Reporting ADR suspected by Healthcare Professional to National Authority 14(14.5%)
   - C. Both A&B 60(62.5%)
   - D. None 0

3. **How are Adverse Drug Reactions classified?**
   - A. Dose related 26(27.08%)
   - B. Unpredictable 21(21.8%)
   - C. Chronic and Continuous 06(6.25%)
   - D. All the above 43(44.7%)

4. **Do you think Dental Practitioners should be Trained in ADR Reporting?**
   - A. Yes 96(100%)
   - B. No 0

5. **Do you come across Adverse Drug Reactions frequently?**
   - A. Yes 21(21.8%)
   - B. No 75(78.1%)

6. **Do you think it’s necessary to include Pharmacovigilance at Undergraduate level?**
   - A. Yes 96(100%)
   - B. No 0

7. **Regulatory body for ADR Reporting in India?**
   - A. Central Drug Standard Control Association 45(46.8%)
   - B. Adverse Drug Reactions Online Information Tracking System 31(32.2%)
   - C. Eudra Vigilance 13(13.5%)
   - D. Medwatch 07(7.29%)

8. **Most common Adverse Drug Reactions seen frequently?**
   - A. Stomach pain/Heart burn/Vomiting/Diarrhea 43(44.7%)
   - B. Headache/Dizziness 14(14.5%)
   - C. Skin rashes/ Allergic reactions 34(35.4%)
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<th></th>
<th>D. Patches on Tongue</th>
<th>05(5.2%)</th>
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<tr>
<td>9</td>
<td>Do you inform patients regarding Adverse Drug Reactions?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. Yes</td>
<td>96(100%)</td>
</tr>
<tr>
<td></td>
<td>B. No</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Do you motivate patients to report any Reactions caused after usage of drugs?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A. Yes</td>
<td>96(100%)</td>
</tr>
<tr>
<td></td>
<td>B. No</td>
<td>0</td>
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**DATA COLLECTION**

Ninety six questionnaires were collected back from dentists. A time of one day was given for collection of anonymously filled form.

**RESULTS:**

Out of 100 questionnaires given to dentists 96 were returned. Among 96 dentists 47 i.e. 48.9 percent of dentists were aware of adverse drug reactions and 60 i.e. 62.5 percent of dentists were aware of ADR reporting. The results are quite satisfactory compared to other studies conducted in different parts of India.
III. DISCUSSION:

Various factors associated with knowledge and attitude of doctors is reason for underreporting of ADR among dentists. Many studies were conducted previously about ADR and its reporting alone in India. Previous studies stated that knowledge of health care providers regarding ADR and its reporting is very low but surprisingly we noticed that 48.9% of dentists participated were aware of ADR and 62.5% of dentists were aware of ADR reporting which is quite satisfactory compared to other studies conducted in various parts of India.

According to sarfaraaz\textsuperscript{3} 18.9% of dental doctors were of ADR monitoring body whereas according to our study 46.8% of dentists were aware about central drug standard control association, as monitoring body for ADR in India. This is comparatively high. Currently, ADR reporting is not well established in the country, we are still in process of implementing pharmacovigilance programs across the country. In this case variations in the awareness about ADR reporting at different
places can be expected. both low or high awareness can be due to
awareness campaigns run by local monitoring bodies.

Even though there is high rate of ADR seen in hospitalized
patients, sarfaraz3 observed that 34.4% dentists confirmed that
they have never come across ADR, this is similar to our study
where 78.1% dentists never came across ADR and remaining
21.9% dentists who came across ADR never thought of reporting.
This is a matter to be concerned about and measures should be
taken to implement ADR reporting among dentists. Interestingly
almost every dentist thinks that dental practitioners should be
trained in ADR reporting and suggested that pharmacovigilance
programs should be included in undergraduate curriculum to
improve knowledge and create awareness among budding doctors
regarding ADR and its reporting.

In our study almost every dentist was willing to inform
patients regarding unusual reactions caused after ingestion of drug
and motivated them to report any reactions caused after usage of
drug even though most of them were not aware about
pharmacovigilance program sand lack of training in ADR
reporting among dental professionals.

Many studies conducted across country conclude that there
is gradual growth in awareness about adverse drug reactions
among health care professionals .further we noticed positive
attitude of dental practitioners towards ADR and its reporting. As
this is single center study with limited numbers of dentists; the
results of the study may not be generalized. A multicentric study
may provide greater insight about underlying factors for under
reporting of ADRs among dental professionals in India.

IV. CONCLUSION:
The present study concludes that lack of knowledge and
problem in attitudes of dental doctors as causative factors in under
reporting of ADRs. These factors include lack of awareness about
ADR reporting system, inadequate training to recognize ADRs,
fear factors. These factors should be given more importance while
designing awareness programs and pharmacovigilance related
continued dental education programs and training.

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AUTHORS
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