

# 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.<sup>1</sup> 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 asses 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<sup>1</sup>. 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<sup>4</sup>. 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:

Sl. No	K A P Questionnaire	Dentists Response N=96 , n=%

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%)

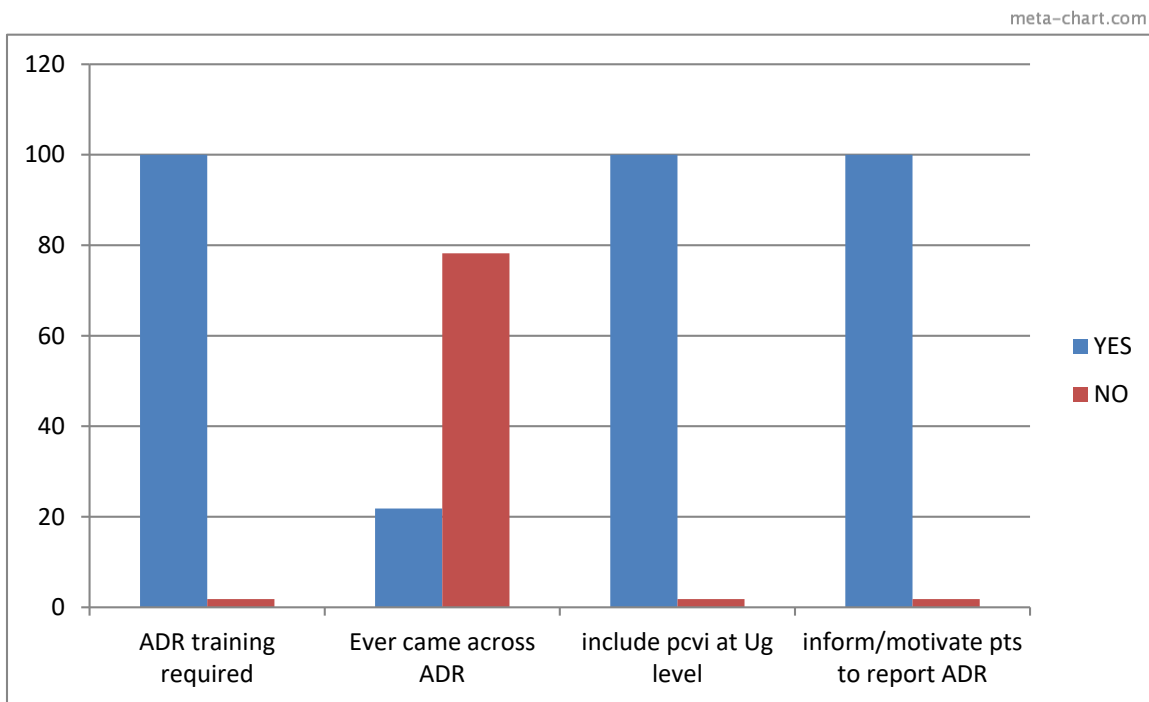
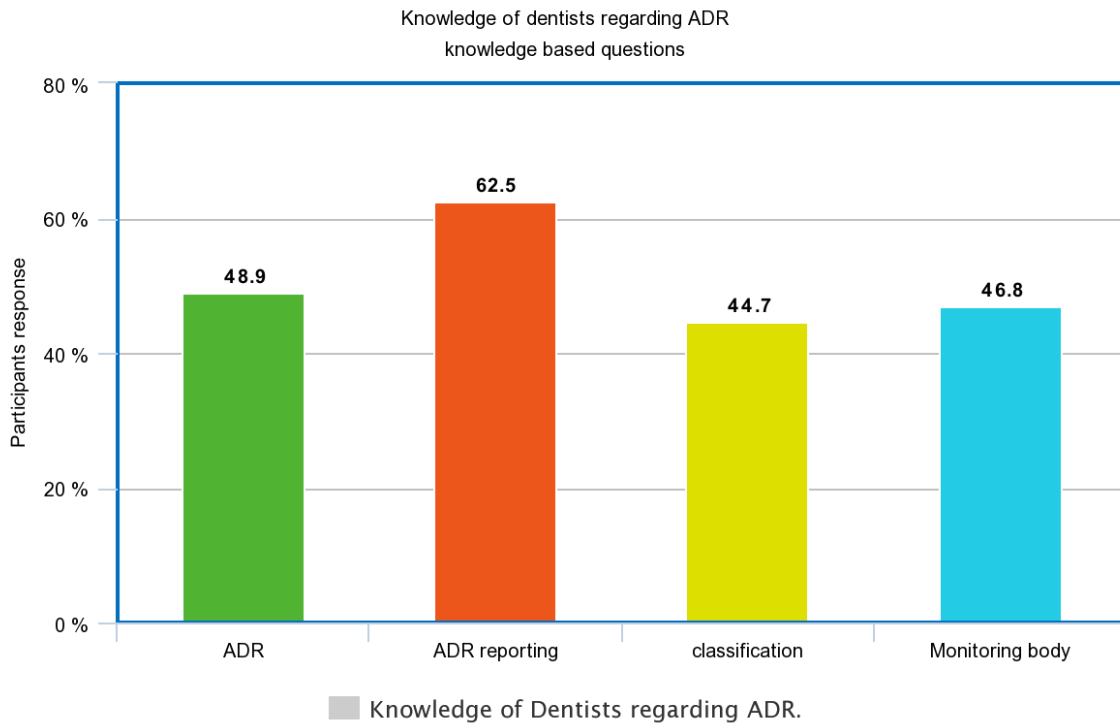
	D. Patches on Tongue	05(5.2%)
9	Do you inform patients regarding Adverse Drug Reactions?	
	A. Yes	96(100%)
	B. No	0
10	Do you motivate patients to report any Reactions caused after usage of drugs?	
	A. Yes	96(100%)
	B. No	0

**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<sup>3</sup> 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, sarfaraaz<sup>3</sup> 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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