

**A STUDY TO EVALUATE THE KNOWLEDGE, ATTITUDE AND PRACTICE OF  
PHARMACOVIGILANCE AMONG DENTAL PRACTITIONERS IN A DENTAL  
COLLEGE IN GREATER NOIDA**<sup>1</sup>\*Dr. Rajeshwari Gore, <sup>2</sup>Nidhi Arora, <sup>3</sup>Nimisha Aggarwal, <sup>4</sup>Nisha Gupta and <sup>5</sup>Nidhi Priya<sup>1</sup>Reader, ITS Dental College, Greater Noida.<sup>2,3,4,5</sup>Second year BDS Student, ITS Dental College, Greater Noida.**\*Corresponding Author: Dr. Rajeshwari Gore**

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**ABSTRACT**

**Aim:** To evaluate the knowledge, attitude and practice of Pharmacovigilance among dentists in a teaching dental college in Greater Noida. **Material and Methods:** - We conducted a cross-sectional questionnaire based study among 82 dentists working in a dental college. The questionnaire was validated first by conducting a pilot study among 10 subjects. Written consent was obtained from the participants before initiating the study. **Result:** We found that 70.73% of the subjects were aware about Pharmacovigilance, while 41.4% exactly knew what PVG consists of. 90.62% people thought that reporting to ADR is necessary and 76.82% thought that AMC (Adverse reaction Monitoring Centre) should be established in every health institute. 35.36% of people had gone through the articles of pharmacovigilance and almost 29.26% of the subjects had come across an adverse drug reaction. **Conclusion:** We have come a long way from where we initially started in the field of pharmacovigilance but underreporting remains an important problem area which need to be addressed and taken care of.

**KEYWORDS:** Pharmacovigilance, Dentists, Underreporting, Adverse drug reactions.**INTRODUCTION**

Reporting of ADRs (adverse drug reactions) is vital in improving the overall healthcare standards of the society and PVG (Pharmacovigilance) forms an important pioneer in doing so. The need for monitoring of drug safety was first highlighted by an Australian obstetrician W. McBride in Dec 1961. He prescribed thalidomide in pregnant women for its antiemetic and sedative property which lead to a deformity in infants known as phocomelia due to its in- utero exposure.<sup>[1]</sup> This incidence highlighted the need for early detection and assessment of adverse drug reactions. After this the WHO planned a pilot project in 1968 under the name of "Programme for International Drug Monitoring" wherein the focus was to gather ADR data from all around the world. This was mainly aimed to analyse and recognise the earliest signs of an ADR to prevent any drug related mishaps.<sup>[2]</sup> Since then there has been a rapid increase in the reporting and analysis of ADRs but still they remain the 6<sup>th</sup> leading cause of death in India.<sup>[3]</sup> Studies have shown that adverse reactions also account to a huge economic burden on the society by leading hospitalization in almost 5-20% of the cases.<sup>[4,5]</sup> Reporting of ADRs spontaneously is the most important practice to highlight adverse reactions from a particular drug and analyse its safety for use in other patients. Unfortunately the seriousness of ADR reporting has not

trickled deep into the health care system and therefore we face underreporting of even serious ADRs.<sup>[6-9]</sup>

As per reports from the UMC (Uppsala Monitoring Centre) the percentage of overall ADR reporting is only 6-10% and insufficient knowledge and awareness were the leading cause of this underreporting.<sup>10-11</sup> The onus lies in the hands of the health care professional to bring about a change in ADR reporting and maximize drug safety. As the primary care givers the HCPs (Health Care Professionals) primary duty is to understand the importance of the role they play and the impact they can bring about in improving the overall health care experience and lowering the economic burden brought about by these ADRs. A number of studies have been conducted to assess the knowledge, attitude and practice regarding pharmacovigilance amongst the health care professionals. Dentists form an important part of these primary care givers and hence their role in PVG is extremely important. Hence the present study was planned to create awareness and assess the knowledge, attitude and practices of pharmacovigilance among dentists in our institute.

**MATERIALS AND METHODS**

We conducted a cross-sectional questionnaire based study among dental practitioner in I.T.S Dental College

and Research Centre during the academic year May-December 2019. The study was approved by the ethical committee of the institute. The questionnaire was prepared and approved by pharmacology department of our institute. It consisted of 20 questions to assess the knowledge, attitude and practice towards reporting ADRs, need of ADR reporting and factors that hinder the dental practitioner from reporting.

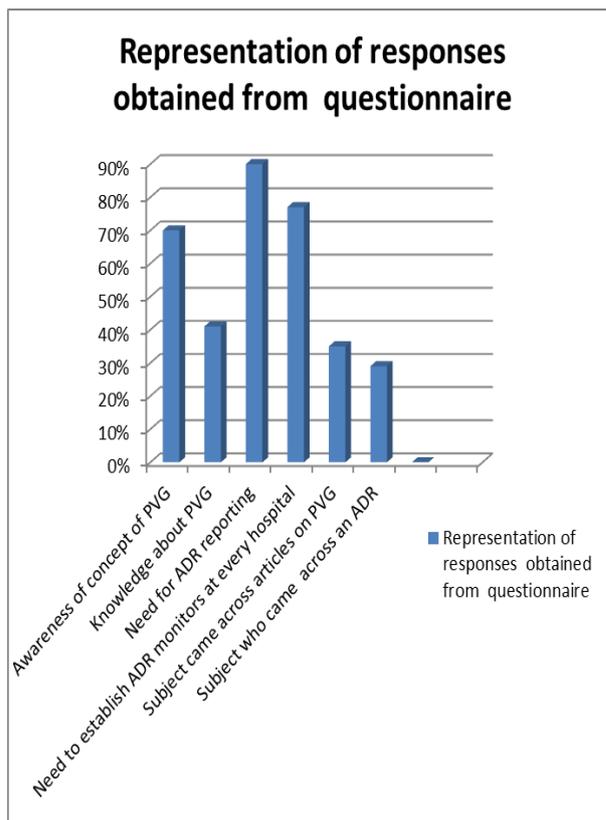
Before conducting the actual study a pilot study was performed to test the questionnaire by randomly distributing it amongst 10 health care professionals to validate the questionnaire in terms of understanding of the questions. Our aim was to keep it simple and direct to obtain maximum input.

This survey was conducted among 82 dental professionals which included faculty, post-graduate students and interns from various departments. The dental practitioner were explained about the aim and objectives of the study in detail. Written Consent was obtained from them ensuring the confidentiality of information gathered and being used for the purpose of the research.

## RESULT

A total of 82 health care professional were involved in this study which comprised of 32 faculty members, 30 post- graduate students and 20 interns from various department of ITS Dental College. The questions were divided into three sections of knowledge, attitude and practice. Results have been represented graphically below. (Graph 1).

According to our study out of a total of 82 subjects only 70.73% were aware about the concept of pharmacovigilance, only 41.46% of knew what exactly pharmacovigilance included. 90.62% people thought that reporting to ADR is necessary and only 3.65% of the subjects thought that reporting to ADR is not important. According to 76.82% ADR monitoring should be establish in every hospital. 35.36% of people had gone through the articles of pharmacovigilance and almost 29.26% of the subjects had come across an ADR. Our study showed that the healthcare practitioner has knowledge & supportive attitude towards pharmacovigilance but the practise of reporting was low.



Graph 1.

## DISCUSSION

Underreporting of ADRs poses the greatest threat to establish and improve drug safety. Amongst the various reasons for underreporting, like inadequate infrastructure, expertise and regulation, lack of awareness of PVG tops them all.<sup>[12]</sup> The most practical and full proof solution to this would be to target the HCPs into imbibing the practice of PVG routinely by considering it as an important duty in practice of care giving.<sup>[13-15]</sup>

Dentists form an important part of the primary care giver group, they prescribe various medicines for orodental diseases. The routinely prescribed drugs range from analgesics, antacids to antibiotics, muscle relaxants and local anesthetics via various routes. These drugs have known to cause various ADRs including headache, tinnitus to anaphylactic shock, arrhythmia's, ataxia and teratogenicity. The mortality rate of ADRs is reported to be 3.67 %.<sup>[16]</sup>

In our study we observed that most of the participants were aware of PVG and thought that an AMC (ADR Monitoring Centre) should be established in every hospital both these findings were supported by a study by Singh et al in 2018.<sup>[17]</sup> Almost 91% of participants in our study thought that reporting of ADR was important, which was also shown in two other similar studies by Jadhav et al and Mohapatra et al where the percentage was 88.6 % and 73% respectively.<sup>[18,19]</sup> A mere 3.65% of the our subjects thought that ADR reporting was not

necessary whereas as per results from a study by Jadhav et al the percentage 11.32 %.<sup>[18]</sup>

Among our study participants 29.2% had come across an ADR whereas the other studies showed that the same percentage was 34.4% in study conducted by Sarfaraz et al and 65.09% in a study conducted by Jahav et al of reporting.<sup>[18,20]</sup> 41.4 % of our study subjects knew exactly what PVG means and includes, while in another study by Mohapatra et al the percentage was quite high that is 76 %, this discrepancy could be due to the difference in subjects involved, as we conducted this study in a dental college and the study by Mohapatra et al was conducted in a medical college.<sup>[19]</sup> This does put light on the fact that there is a considerable difference in understanding of importance of PVG among medical and dental professionals. Also in our study 35.3% of participants had come across articles on PVG.

## CONCLUSION

On comparing our study with other similar studies, we found that there was a huge discrepancy in knowledge and practice of PVG between medical and dental practitioners, which certainly means that more measures should be taken to improve this, as dentists form an important part of the health care practitioners. Also, the need of establishing AMC in all health care institutes was highlighted in our study. Hence we conclude by saying that though we have achieved a lot from where we started in the field of PVG there are still many problem areas which need to be addressed and taken care of.

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**Conflict of Interest:-** None.

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