# KNOWLEDGE, ATTITUDES AND PRACTICES OF DENTAL STUDENTS TOWARD VAZIRANI AKINOSI TECHNIQUE - A Questionnaire Survey

Type of Article: Knowledge, attitude and practice survey. Running title: Knowledge, Attitudes and Practices of dental Students toward Vazirani Akinosi Technique

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## Abstract

The inferior alveolar nerve block is the most commonly used injection technique for local anesthesia of the mandible while doing surgical procedures. But it if found that this block does not alwat achieve 100% successful pulpal anesthesia. Failure rates are found to be 10% to 40% in experimental studies. Gow-Gates invented a new mandibular block in 1973. This method of injection uses an extraoralapproach with the help of the landmarks, and the target site is the neck of condyle. Many studies have come to prove that this technique has more success rate (92 to100%) than the conventional inferior alveolar nerve block technique(65 to 86%). However, Todorovic et al. found that a the conventional inferior alveolar nerve block was more successful in anasthetising the area of interest than the Gow-Gates block, whereas Ågren and Danielsson , Montagnese et al., and Hung et al. found the 2 techniques provided the same success rate. Akinosi introduced a new technique for mandibular anesthesia in 1977. But, Vazirani also described the same technique in 1960 and so the technique was named as the Vazirani-Akinosi technique. The injection is a closed mouth technique. The landmarks for the injection are the mucogingival junction of the maxillary second molar. This technique is used when there was a condition of limited mouth opening, in cases of trismus, which indicates the use of the inferior alveolar or Gow-Gates techniques. Sisk and Todorovic found the VaziraniAkinosi technique was equivalent to the conventional inferior alveolar nerve block. Whereas, many others claimed that the conventional inferior alveolar nerve block was superior than the Vazirani-Akinosi technique. Further studies and research of Gow-Gates and Vazirani-Akinosi technique are needed to ensure their appropriate clinical use. Evaluated.

## Material and Methods:

A cross-sectional study was conducted in December 2016 using a self-structured questionnaire to collect information from Dental colleges in chennai

**Results:** Knowledge, attitude and practice of the vazirani akinosi technique is more followed by post graduate belonging to the Department of Oral and maxillofacial surgery

Conclusion: Based on the results of this survey, authors concluded that there is lack of knowledge about the vazirani akinosi technique among undergraduates and post graduates. Participation in such workshops must be made mandatory for all dental health care providers.

## Keywords: Local anasthesia, nerve block, injection, LA

## Introduction

The inferior alveolar nerve block is the most commonly used injection technique for local anesthesia of the mandible while doing surgical procedures. But it if found that this block does not alwat achieve 100% successful pulpal anasthesia. Failure rates are found to be 10% to 40% in experimental studies. Gow-Gates invented a new mandibular block in 1973. This method of injection uses an extraoral approach with the help of the landmarks, and the target site is the neck of condyle. Many studies have come to prove that this technique has more success rate (92 to100%) than the conventional inferior alveolar nerve block technique(65 to 86%).

However, Todorovic et al. found that a the conventional inferior alveolar nerve block was more successful in anasthetising the area of interest than the Gow-Gates block, whereas Ågren and Danielsson, Montagnese et al., and Hung et al. found the 2 techniques provided the same success rate. Akinosi introduced a new technique for mandibular anesthesia in 1977. But, Vazirani also described the same technique in 1960 and so the technique was named as the Vazirani-Akinosi technique. The injection is a closed mouth technique. The landmarks for the injection are the mucogingival junction of the maxillary second molar. This technique is used when there was a condition of limited mouth opening, in cases of trismus, which indicates the use of the inferior alveolar or Gow-Gates techniques. Sisk and Todorovic found the VaziraniAkinosi technique was equivalent to the conventional inferior alveolar nerve block. Whereas, many others claimed that the conventional inferior alveolar nerve block was superior than the Vazirani-Akinosi technique. Further studies and research of Gow-Gates and Vazirani-Akinosi technique are needed to ensure their appropriate clinical use.

Aim: The aim of this study was to assess dental students knowledge about the vazirani akinosi technique **Objectives** 

1. To gather the knowledge and attitude of the vazirani akinosi technique among dental students.

2. To assess the practical usage of the vazirani akinosi technique

## Material and methods

A. Study design:

i. Place of study- Department of Oral and Maxillofacial Surgery, Saveetha Dental College and Hospital, Chennai.

ii. Source of Data- Dental colleges in Chennai.

iii. Sample Description- Four groups including post graduates and interns, final year and third year undergraduates of different dental colleges in chennai

iv. Selection Criteria-

- 1. Inclusion Criteria:
- Dental students of Diferrent dental colleges in chennai

• Four groups including post graduates and interns, final year and third year undergraduates of various

Dental Colleges and Hospital in Chennai

- 2. Exclusion Criteria:
- Students who are unwilling to participate in the study.
- Those students who remain absent for three consecutive days.
- B. Material/Equipment for the study:
- A self-made questionnaire

## C. Methodology:

This will be a cross-sectional questionnaire study. A set of 15 questions was given to each of the four groups which include post graduates and interns, final year and third year undergraduates of Saveetha Dental College and Hospital. The students were assessed on the basis of their knowledge (9 questions) about local anaethetic technique (2 questions) the technique of the vazirani akinosi technique and rhei practical usage of the technique (4 questions).

## **Result:**





## Discussion

Knowledge, Attitude and Practice of post graduates is more followed by interns, final years and third years. Logical learning about the vazirani akinosi technique is a must among dental students. They must have sound theory knowledge as well as be trained to practically use the technique on a regular basis.

#### Conclusion

The current study will help us in understanding the knowledge, attitude and practice on the vazirani akinosi technique among the budding doctors. As dental science students are an integral part of the health care system, and often play the role of relieveing pain for patients, they must be trained in handling and practicing different type of local anasthetic admistration technique as the condition of the patient deamands.

## **References:**

1. Nusstein J, Reader A, Beck M. Anesthetic efficacy of different volumes of lidocaine with epinephrine for inferior alveolar nerve blocks. Gen Dent 2002;50:372–5.

2. Gow-Gates GAE. Mandibular conduction anesthesia: a new technique using extraoral landmarks. Oral Surg Oral Med Oral Pathol 1973;36:321–8.

3. Robertson WD. Clinical evaluation of mandibular conduction anaesthesia. Gen Dent 1979;27:49-51.

4. Levy TP. An assessment of the Gow-Gates mandibular block for third molar surgery. J Am Dent Assoc 1981;103:37–9.

5. Malamed SF. The Gow-Gates mandibular block: evaluation after 4,275 cases. Oral Surg Oral Med Oral Pathol 1981;51:463–7.

6. Sisk AL. Evaluation of the Gow-Gates mandibular block for oral surgery. Anesth Prog 1985;32:143-6.

7. Cruz EV, Quengua JB, Gutierrez IL, Abreu MA, Uy HG. A comparative study: classical, Akinosi, and Gow-Gates techniques of mandibular nerve block. J Philipp Dent Assoc 1994;46:13–9.

8. Todorovic L, Stajcic Z, Petrovic V. Mandibular versus inferior dental anaesthesia: clinical assessment of 3 different techniques. Int J Oral Maxillofac Surg 1986;15: 733–8.

9. Ågren E, Danielsson K. Conduction block analgesia in the mandible. Swed Dent J 1981;5:81-9.

10. Montagnese TA, Reader A, Melfi R. A comparative study of the Gow-Gates technique and a standard technique for mandibular anesthesia. J Endod 1984;10:158 – 63.

11. Hung PC, Chang HH, Yang PJ, Kuo YS, Lan WH, Lin CP. Comparison of the Gow-Gates mandibular block and inferior alveolar nerve block using a standardized protocol. J Formos Med Assoc 2006;105:139 – 46.

12. Akinosi JO. A new approach to the mandibular block. Br J Oral Surg 1977;15:83-7

13. Vazirani SJ. Closed mouth mandibular nerve block: a new technique. Dent Dig 1960;66:10 -3.

14. Malamed SF. Handbook of local anesthesia. 4th ed. St Louis, MO: Mosby, 1997:208.

15. Sisk AL. Evaluation of the Akinosi mandibular block technique in oral surgery. J Oral Maxillofac Surg 1986;44:113–5. 16. Donkor P, Wong J, Punnia-Moorthy A. An evaluation of the closed mouth mandibular block technique. Int J Oral Maxillofac Surg 1990;19:216–9.

17. Yücel E, Hutchison IL. A comparative evaluation of the conventional and closedmouth technique for inferior alveolar nerve block. Aust Dent J 1995;40:15–6.

18. Gonzalez M, Pena B, Caliz F, Marin SH, Diago P. A comparative study of direct mandibular block and the Akinosi technique. Med Oral 2003;8:143–9.

19. Jorgensen NB, Hayden J Jr. Local and general anesthesia in dentistry. 2nd ed. Philadelphia, PA: Lea & Febiger, 1967. 20. Gustaninis JF, Peterson LJ. An alternative method of mandibular nerve block. J Am Dent Assoc 1981;103:33–6.

21. Dreven L, Reader A, Beck M, Meyers W, Weaver J. An evaluation of the electric pulp tester as a measure of analgesia in human vital teeth. J Endod 1987;13:233–8.

22. Certosimo A, Archer R. A clinical evaluation of the electric pulp tester as an indicator of local anesthesia. Oper Dent 1996;21:25–30.

23. Coleman RD, Smith RA. The anatomy of mandibular anesthesia: review and analysis. Oral Surg Oral Med Oral Pathol 1982;54:148-53.