



## Awareness About Spinal Anaesthesia Among Dental Students

Nithyanandham Masilamani, Dhanraj Ganapathy\*

Department of Prosthodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Chennai, Tamil Nadu, India

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### ABSTRACT

Spinal anaesthesia is administered in the lumbar spinal region and utilized for surgeries, including the lower midsection, pelvis and lower extremities. Spinal anaesthesia is acted in the lumbar region, explicitly the mid to low lumbar levels to maintain a strategic distance from harm to the spinal cord and furthermore to forestall intrathecally-administered drugs from having any action in the upper cervical and thoracic areas. The aim of the study is to assess the awareness about spinal anaesthesia among dental students. This was a questionnaire based cross-sectional type of study comprising 100 dental college students in Chennai. A self-designed questionnaire contains ten questions based on the knowledge and awareness about spinal anaesthesia among dental college students. Questionnaires were circulated through an online website survey planet. The questions explored the awareness on spinal anaesthesia, indications, contraindications, mechanism of administration and side complications. After the responses were received from 100 participants, data was collected and analysed. 18% are aware about spinal anaesthesia. 15% are aware of the mechanism of administration of spinal anaesthesia. 13% are aware of the indications of spinal anaesthesia. 11% are aware of the contraindications of spinal anaesthesia. 9% are aware of the complications of spinal anaesthesia. The awareness about spinal anaesthesia was less among dental students. Increased awareness and educational programs should be initiated to spread knowledge about applications of spinal anaesthesia.



### \*Corresponding Author

Name: Dhanraj Ganapathy  
Phone: 9841504523  
Email: dhanrajmganapathy@yahoo.co.in

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### INTRODUCTION

The central nervous system (CNS) involves the brain tissues and spinal cord. The term neuraxial sedation alludes to the position of nearby sedative in

or around the CNS. Spinal sedation is a neuraxial sedation procedure in which nearby sedative is put legitimately in the intrathecal space. The subarachnoid space stores clean cerebrospinal liquid (CSF), the unmistakable liquid that washes the brain and spinal cord. There are generally around 100 to 140 mL of CSF in a grown-up human which constantly cycles for the duration of the day. Roughly 300 mL of CSF gets created each day. Other neuraxial methods incorporate epidural and caudal sedation, each having its specific signs. Spinal sedation is just acted in the lumbar spine and utilized for surgeries, including the lower mid-region, pelvis and lower furthest points.

Spinal anaesthesia is administered in the lumbar spinal region and utilized for surgeries, including the lower midsection, pelvis and lower extremities. Spinal anaesthesia is acted in the lumbar region,

explicitly the mid to low lumbar levels to maintain a strategic distance from harm to the spinal cord and furthermore to forestall intrathecally-administered drugs from having any action in the upper cervical and thoracic areas.

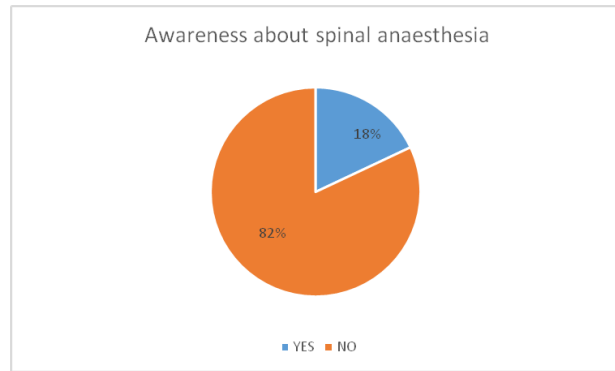
The caudal termination of the spinal cord is the conus medullaris and as a rule, is at the distal fringe of the first or some of the time the second lumbar vertebral body. In pediatric patients, it is somewhat more sub-par, by and large closure around L3. In the grown-up populace, the mean conus position is the lower third of L1. The variety in conus positions follows an ordinary appropriation. No critical distinction in conus position is seen among patients or with expanding age (Saifuddin *et al.*, 1998). The dural sac typically reaches out to S2/3. Therefore, the addition of the spinal needle for spinal sedation is for the most part at the L3-5 lumbar interspace. Spinal cord injury is almost certain while picking higher interspaces, particularly in fat patients (Broadbent *et al.*, 2000). The spinal sedative arrangements may go from lidocaine, ropivacaine, bupivacaine, procaine or tetracaine. There are sure surgeries utilizing iliac crest graft utilized for oro facial reconstructions, and this harvesting of iliac crest should be possible under spinal anaesthesia. Hence dental students must be aware of spinal anaesthesia, and thus this study was done to assess the awareness about spinal anaesthesia among dental students.

**MATERIALS AND METHODS**

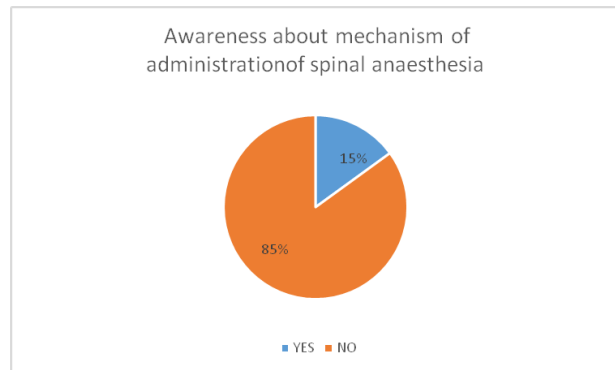
This was a questionnaire based cross-sectional type of study comprising 100 dental college students in Chennai. A self-designed questionnaire contains ten questions based on the knowledge and awareness about spinal anaesthesia among dental college students. Questionnaires were circulated through an online website survey planet. The questions explored the awareness on spinal anaesthesia, indications, contra indications, mechanism of administration and side complications. After the responses were received from 100 participants, data was collected and analysed.

**RESULTS**

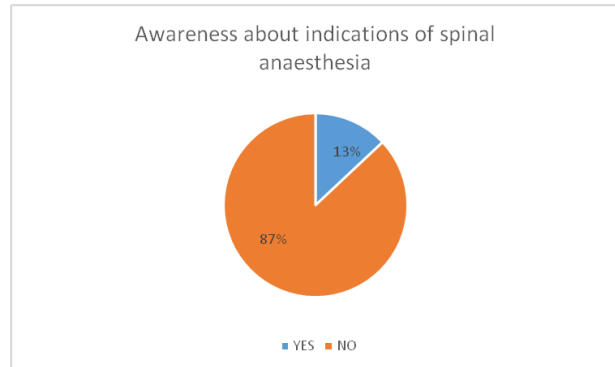
18% are aware about spinal anaesthesia (Figure 1). 15% are aware of the mechanism of administration of spinal anaesthesia (Figure 2). 13% are aware of the indications of spinal anaesthesia (Figure 3). 11% are aware of the contraindications of spinal anaesthesia (Figure 4). 9%.are aware of the complications of spinal anaesthesia (Figure 5).



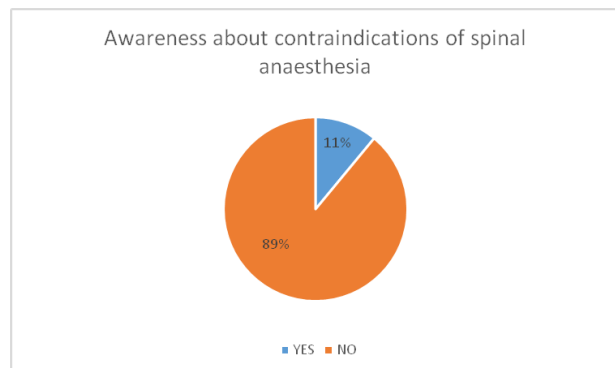
**Figure 1: Awareness about spinal anaesthesia**



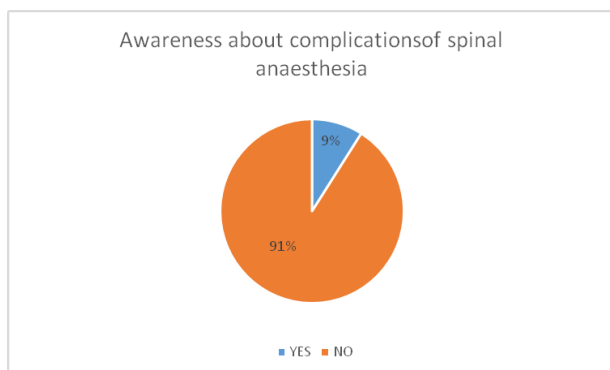
**Figure 2: Awareness about the mechanism of administration of spinal anaesthesia**



**Figure 3: Awareness about indications of spinal anaesthesia**



**Figure 4: Awareness about contraindications of spinal anaesthesia**



**Figure 5: Awareness about complications of spinal anaesthesia**

## DISCUSSION

Neuraxial anaesthesia is utilized as a sole sedative or in blend with general anaesthesia for most methodology beneath the neck. Spinal anaesthesia is in like manner use for surgeries, including the lower mid-region, pelvis, perineal and lower furthest points; it is gainful for strategies underneath the umbilicus (Klasen *et al.*, 2003).

There are contraindications associated with neuraxial anaesthesia. The total contraindications are the absence of assent from the patient, raised intracranial weight (ICP), principally because of intracranial mass and disease at the site of the system with the danger of meningitis (Hartmann *et al.*, 2002; Carpenter *et al.*, 1992).

Suitable patient determination and care ought to be built up to help hinder normal intricacies related to neuraxial sedation. While a considerable lot of the difficulties are of low rate, it merits monitoring them. Serious intricacies are accepted to be very uncommon, yet the recurrence is most likely under computed (Moen *et al.*, 2004). Some frequent ones are Nausea, backache, Postdural puncture headache vomiting, hypotension, total spinal anaesthesia, low-frequency hearing loss, Neurological injury, Arachnoiditis, Spinal hematoma, Transient neurological syndrome (Halpern and Preston, 1994; Zaric and Pace, 2009).

Neuraxial sedation offers numerous advantages that not accessible with general sedation. Neuraxial sedation has made it conceivable to perform many significant strategies on a conscious patient. For instance, cesarian segments can be better and securely performed by means of neuraxial sedation than with general sedation, which permits the foundation of holding between a matern and her neonate with immediate effect (Hunter, 1972).

Neuraxial sedation has shown itself a helpful aide to general sedation. The utilization of thoracic epidu-

ral as post-operation torment methodology in post-thoracotomy patients has assisted with improving the respiratory status of patients. Other advantageous impacts are preferred agony authority over intravenous opiates, less requirement for systemic narcotics, prior recuperation of entrail capacities, and simpler support in physical therapy. Neuraxial sedation is a gainful sedation methodology that has helped for a wide scope of surgeries. It comes with dangers of which human services suppliers should know. The tolerant choice is basic and ought to be driven via cautious history and physical assessment. The sign for neuraxial sedation needs to coordinate the careful needs of the patient. After the medical procedure, the post-operation group should know about the strategy, and the patient needs to be observed by very much prepared work force. Patient's hemodynamics needs to be evaluated in the prompt post-operation period until the goals of the sedative (Zaric *et al.*, 2005; Zaric and Pace, 2009). Medical attendants and doctors from other field dealing with the patient should know about the idea of sedation that patient experienced. The dental students were not aware of spinal anaesthesia, its indications, contra indications, mechanism of action and complications.

## CONCLUSION

The awareness about spinal anaesthesia was less among dental students. Hence suitable measures should be initiated to increase knowledge and awareness of spinal anaesthesia. Increased awareness and educational programs should be initiated to spread knowledge about applications of spinal anaesthesia.

## Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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