



Clinical Audit

Clinical audit: Patients undergoing spinal anaesthesia for Post Dural Puncture Headache (PDPH)

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1. Objective

To reduce the incidence of post dural puncture headache in patients undergoing spinal anaesthesia

2. Background

- 1) Place of Audit: KMC Specialty Hospital, Trichy Cantonment.
- 2) Date of Audit: 01/05/2022 to 31/12/2022
- 3) Source of Audit: Operation theatre, KMC Specialty Hospital, Cantonment.
- 4) Team: Department of Anaesthesiology

3. Purpose and summary of clinical audit

- 1) Postdural puncture headache (PDPH) is a major complication of neuraxial anaesthesia and with inadvertent dural puncture during epidural anaesthesia.
- 2) PDPH can be incapacitating, causing significant morbidity. It may extend the length of the hospital stay or evolve into chronic headache.
- 3) One of the reason for PDPH is using Bevel cut (Quincke) needle for spinal anaesthesia.
- 4) The aim of this audit is to reduce the incidence of post-dural puncture headache by using pencil point (Whitacre) needles.

DATA of the year 2022 May to August

- 1) With the use of (Quincke) cutting needle.

Quincke



(Cutting)



4. Methodology

Citation: Senthil Kumar K. Clinical audit: Patients undergoing spinal anaesthesia for Post Dural Puncture Headache (PDPH). *Kauverian Med J.*, 2024;2(3):6-10.

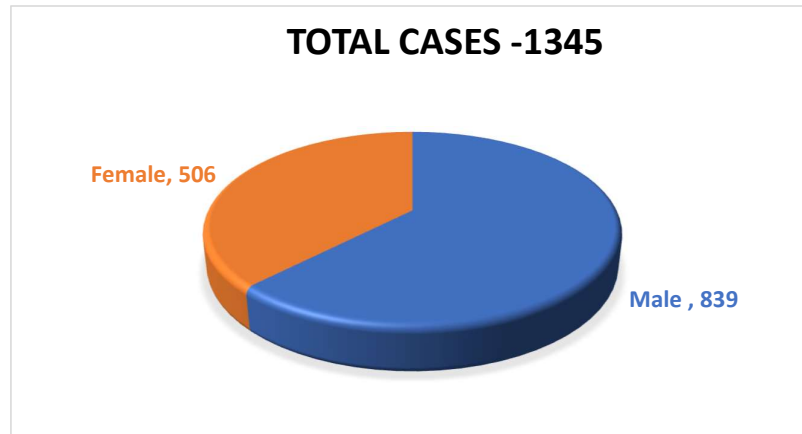
Academic Editor: Dr. Venkita S. Suresh

ISSN: 2584-1572 (Online)

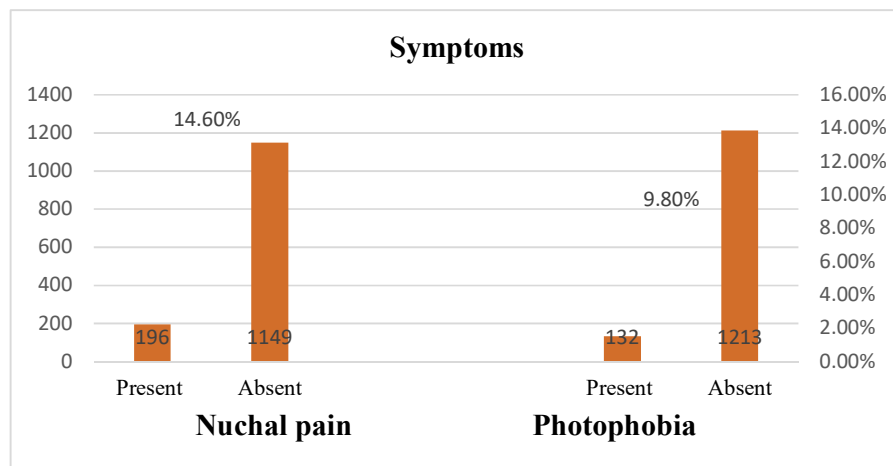
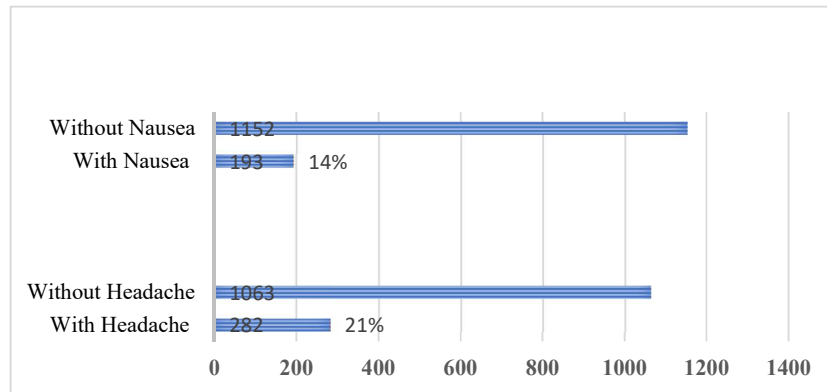


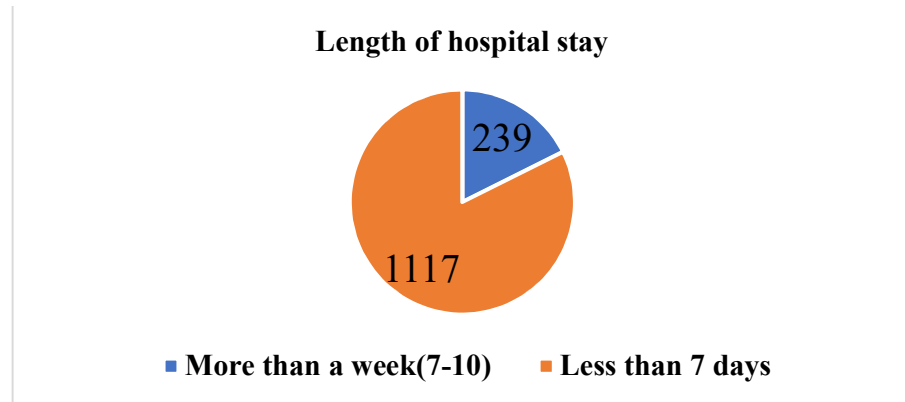
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- 1) Subarachnoid block (SAB) was given using 26 G Quincke needle for all patients undergoing infra-umbilical surgeries.
- 2) All the patients were monitored postoperatively for symptoms of post-dural puncture headache like bilateral frontal or occipital headache, nausea, photophobia, nuchal pain over the period of four months.
- 3) Symptomatic patients were monitored for the duration of Length of stay(LOS).



5. Symptoms





6. Observation

- 1) 21% of the population had headache restricting their day to day activities.
- 2) 14.4% of the population had nausea
- 3) 14.6% of the population had nuchal pain
- 4) 9.8% of the population had photophobia and
- 5) 17.8% of the population had increased length of hospital stay.

All symptomatic patients were treated with:

- 1) T. Paracetamol 650mg thrice a day, Inj. Ondansetron 4 mg I.V BD, I.V. Fluids, strict bed rest.
- 2) Some patients were treated with caffeine if headache was severe.

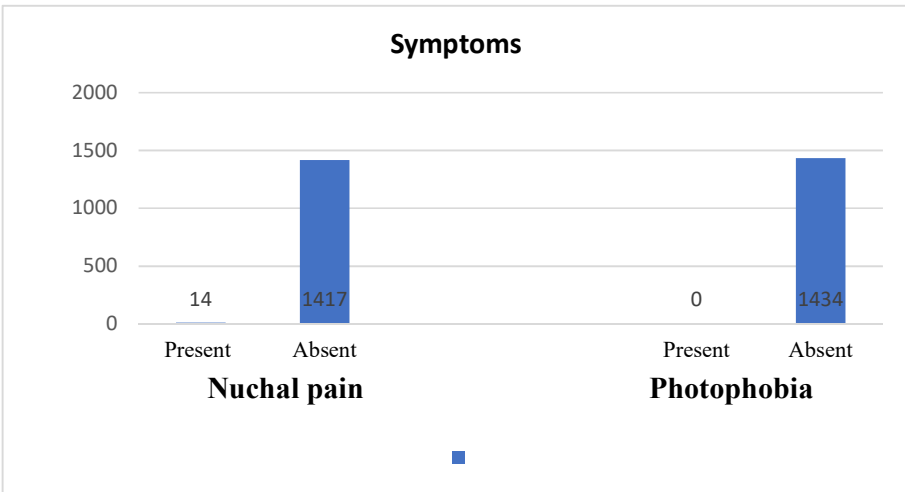
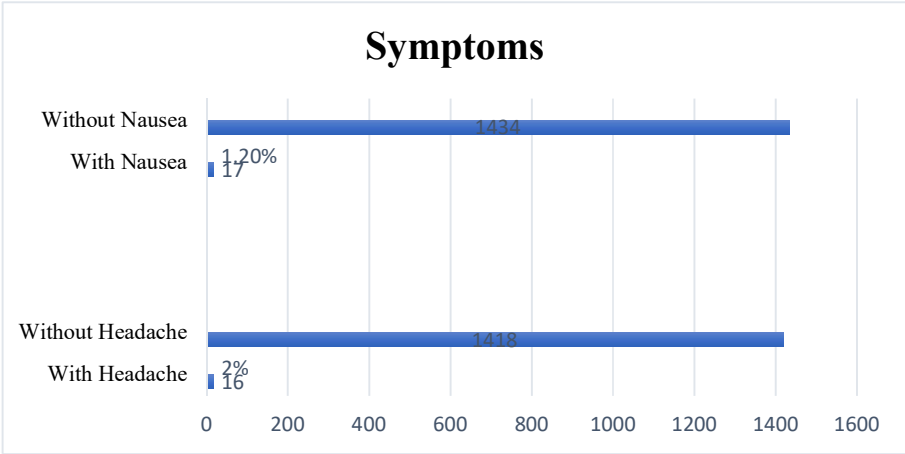
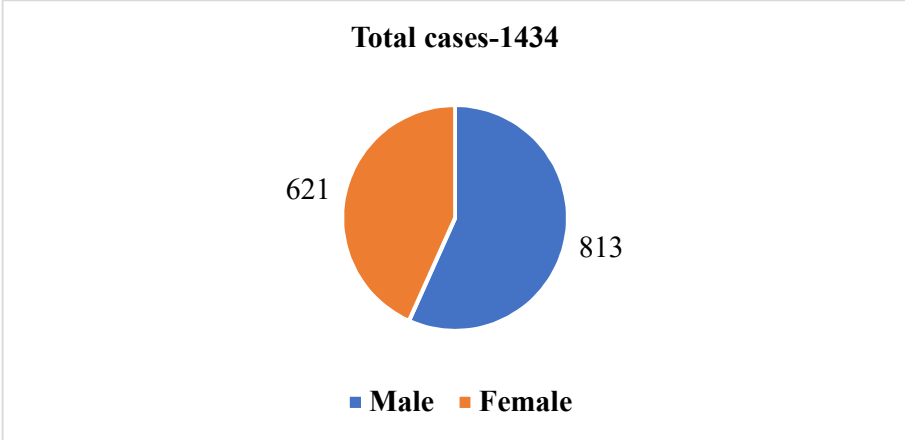
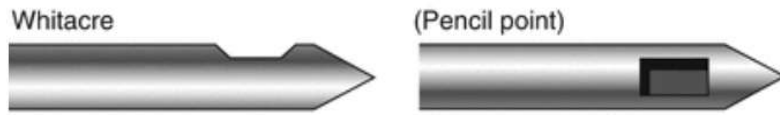
When patients were dissatisfied due to adverse effects following SAB, methods to improve patient outcome were analysed.

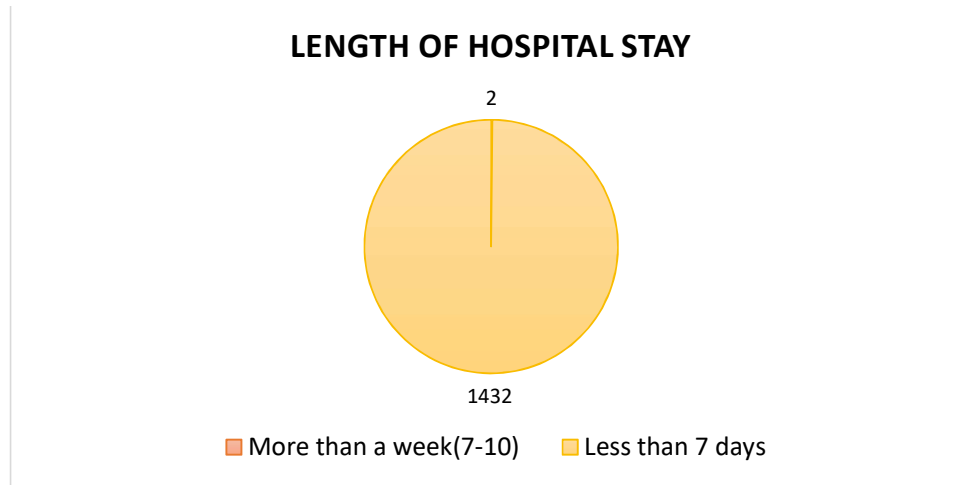
Corrections implemented

- 1) We collected information from various articles and journals; it had been found that using pencil point needles have reduced the incidence of post dural puncture headache.
- 2) Our aim was:
 - a. To reduce the incidence of post-dural puncture headache following spinal anaesthesia.
 - b. To reduce the length of hospital stay by decreasing the incidence of headache, nausea, nuchal pain, photophobia.
 - c. Avoid a later intervention by epidural blood patch.

Data collected in the year 2022 September to December

- 1) After introduction of Whitacre needle





7. Observations

- 1) 2% of the population had headache
- 2) 1.2% of the population had nausea.
- 3) 1% of the population had nuchal pain
- 4) None of the patient had photophobia
- 5) 0.2% Of the population had increased length of hospital stay due to complications related to PDPH.

	Quincke cases	Percentage	Whitacre cases	Percentage
Total cases	1345		1434	
Headache	282	21%	28	2%
Vomiting	193	14%	17	1.2%
Photophobia	131	9.8%	0	0%
Nuchal pain	196	14.6%	14	1%
Length of hospital stay	239	18%	2	0.2%

8. Conclusion

Thus, post dural puncture headache was reduced effectively with the change in type of needle used for subarachnoid block.