



THE STUDY OF RATE OF HEADACHE AFTER CAESAREAN SECTION AND THE SIZE OF NEEDLE FOR SPINAL ANESTHESIA

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ABSTRACT

Headache is one of the common complaints after undergoing the spinal anesthesia. This study puts in an effort to find out the relation between the different gauge needles and the headache symptoms encountered.

KEYWORDS : Headache, Spinal Anesthesia, Gauge Needles.

Introduction:

Spinal anesthesia is one of the commonest techniques used in anesthetic practice in obstetric patients, children, inpatients, and ambulatory surgery patients. Needle design variables, such as the needle size and needle shape, have been modified to enable rapid flow of cerebral spinal fluid (CSF) and injected medications, yet simultaneously limit dural trauma and loss of CSF.^[1] A headache occurring within 5 days after lumbar puncture, and being aggravated when standing or sitting and relieved when lying flat, is defined as postdural puncture headache (PDPH) on the grounds of the International Classification of Headache Disorder, 3rd edition.^[2] PDPH is a well-known iatrogenic complication of spinal anesthesia, which continues to be a major problem.^[3-6] It is the drawback to the use of spinal anesthesia or diagnostic lumbar puncture,^[1-7] resulted from the loss of CSF and the following tension on meninges aroused by the hole created in the dural tissues.^[1] PDPH was usually mild with no limitation of activity and required no treatment while patients with severe PDPH were confined to bed. An epidural blood patch (EBP), injecting the blood of the patients own into the epidural space to patch the hole created in the dural tissues, was often used to treat severe PDPH.^[8]

Aims and Objectives:

To Study the Rate of Headache after Caesarean Section and the Size of Needle for Spinal Anesthesia

Materials and Methods:

This study was done in the Department of Anesthesia in A.J.Institute of Medical Sciences

This study was done using 60 patients.

The study was done from July 2017 to June 2018.

Inclusion Criteria

1. The patients were aged between 20-35 years
2. The patients had no co-morbidities

Exclusion Criteria

1. Aged below 20 and above 35 years
2. Patients with co-morbidities

All the statistics were done using the SPSS software 2015 (California) Spinal anesthesia was done in the sitting position with Group 1 using 25 or Group 2 using 27 gauge Quincke spinal needle randomly. Once free flow of CSF had been recognized the intrathecal anesthetic solution (12.5 mg of 0.5% heavy bupivacaine) was injected over 10 s, aspirating CSF at the end of injection to confirm needle position. The surgical technique was uniform in participants. A fellow P.G asked all participants for feeling of headache and recorded severity with visual analogue scale (VAS) for 3 days.

Results:

Table 1: Frequency of Headache

Group	Group 1	Group 2
Frequency	41	19
P-Vaue	0.00047 (<0.05)	

So it is highly significant.

Table 2: VAS score

Group	Group 1	Group 2
Mean Vas Score	4.17	4.92
Standard deviation	±1.89	± 2.24
P-Vaue	0.00044 (<0.05)	

This is also highly significant.

Discussion:

A study similar to our study showed that smaller needle have lower frequencies of PDPH when a 26 gauge Quincke needle was used and 1.5% with a 27 gauge Quincke needle. In contrast to our study, some researchers reported the rate of a PDPH has not decreased significantly with finer needles^[7-8] compared the frequency of PDPH between the using 24 gauge Sprotte and the 27 gauge Quincke spinal needles. He showed that the severity of the PDPH was not significantly different between two groups. A compared the rate of PDPH between two different size spinal and type needles: The 24 gauge Sprotte versus the 25 gauge Quincke and reported no significant difference between them⁸. We compared two different sizes of needles, but the type of needle was the same between two groups.

Many pharmacologic agents have been advocated as treatments for PDPH. Reports of successful use of pharmacologic agents for the treatment of PDPH are intriguing, but their proper place in the management of PDPH awaits further study of efficacy and safety. While appealing, these options have generally been poorly studied and are of questionable value due to the small number of patients treated, methodological flaws in published reports, publication bias, and the self-limited nature of the disorder. *Methylxanthines*. Due to known cerebral vasoconstrictive effects, this class of drugs has become the most commonly used pharmacologic approach to PDPH. These agents include aminophylline, theophylline, and—the most familiar—caffeine. Experimentally, caffeine has been used intravenously (usually 500 mg caffeine sodium benzoate, which contains 250 mg caffeine) and orally (eg, 300 mg). Published studies of caffeine for PDPH consistently demonstrated improvement at 1–4 hours in over 70% of patients treated. However, a single oral dose of 300 mg caffeine for treatment of PDPH is statistically no better than placebo at 24 hours. With a terminal half-life usually less than 6 hours, repeated doses of caffeine would seem necessary for treatment of PDPH, yet few studies have evaluated more than 2 doses for efficacy or safety

Conclusion

We found a lower rate of PDPH with the 27 gauge in comparison with 25 gauge Quincke needles. Our study confirms the effectiveness of the finer needles to prevent PDPH.

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