Introduction

Obesity in pregnancy is usually defined as a Body Mass Index (BMI) of 30 kg/m² or more at the first antenatal consultation. BMI is a simple index of weight-for-height and is calculated by dividing a person’s weight in kilograms by the square of their height in metres (kg/m²).

There are three different classes of obesity: BMI 30.0–34.9 (Class I); BMI 35.0–39.9 (Class 2); and BMI 40 and over (Class 3 or morbid obesity), which recognise the continuous relationship between BMI and morbidity and mortality. Obesity in pregnancy is associated with an increased risk of a number of serious adverse outcomes, including miscarriage, fetal congenital anomaly, thromboembolism, gestational diabetes, pre-eclampsia, dysfunctional labour, postpartum haemorrhage, wound infections, stillbirth, and neonatal death.

There is a higher caesarean section rate and lower breastfeeding rate in this group of women compared to women with a healthy BMI. A meta-analysis of 33 cohort studies showed that the OR for caesarean section (either elective or emergency) was 1.46 (95% CI 1.34–1.60) and 2.05 (95% CI 1.86–2.27) respectively among women defined as overweight and obese in individual studies, compared to women with a normal weight.

Spinal anesthesia seems to be well-suited for patients undergoing cesarean section because of the short interval from injection to surgical anesthesia. It has a very rapid onset and provides a dense neural block which can produce highly effective pain relief and may decrease patient morbidity after cesarean sections; moreover, failures are very infrequent. Advantages over epidural block include the absence of risk of systemic local anesthetic toxicity, simplicity of technique, and rapid onset of surgical anesthesia.

Spinal anesthesia also called spinal analgesia or subarachnoid block is a form of regional anesthesia and a kind of neuraxial block involving injection of opioids, local anesthetics or other permissive drug into the subarachnoid space. The first spinal anesthetic was delivered by an accident. Its inception can be traced back in the late 19th century by James Leonard Corning. He reported on spinal anesthesia in 1885 for the first time. The first planned spinal anesthesia was administered by August Bier in 1898. He had personal anesthesia in 1885 for the first time. The first planned spinal anesthesia was administered by August Bier in 1898. He had personal

BACKGROUND: Anecdotal experience and limited publications suggest that an inverse relationship between body mass index (BMI) and postdural puncture headache (PDPH) may exist. We hypothesized that parturients with increased BMI have a lower incidence of PDPH than those with a lower BMI after dural puncture.

METHODS: We performed a prospective clinical study during spinal anaesthesia between January 1, 2016, and December 31, 2016. The primary outcome was the incidence of PDPH. The association between BMI and PDPH was assessed using chi square test. Secondary analysis evaluated the highest reported numeric rating of pain scores for headache and the need for an epidural blood patch between BMI groups.

RESULTS: Post dural puncture headache was significantly higher in the non-obese group. The incidence of PDPH in parturients with a BMI ≥30 kg/m² (2%) was lower than in parturients with a BMI <30 kg/m² (18%). Median (interquartile range) headache severity (0-10 verbal rating scale) was (6.6-9.5) and did not differ between parturients in the high versus low BMI groups (P = 0.61).

CONCLUSIONS: The findings are consistent with previous reports of decreased PDPH incidence after unintentional dural puncture in parturients with an increased BMI.
Postdural puncture headache after caesarean section remains an important cause of postoperative morbidity. Of note, Chadwick et al. 24, in a review of closed claims in the ASA database, revealed that headaches are the third most frequent reason for claims against anaesthesiologists in obstetrics 24. Median payment was $5000 (range $1000-$20,000). It is accepted that the incidence of PDPH is directly related to needle size. Children 23, 24, but until recently the smallest size of Quincke needle available was 25 gauge. When used for caesarean section, the 25-gauge Quincke needle is associated with a high incidence of PDPH. This has deterred many from freely adopting spinal anaesthesia in obstetrics. The introduction of finer gauge Quincke needles (27-, 29-gauge) has encouraged their evaluation for caesarean section. The present study aimed to reduce the number of variables that might affect the incidence of PDPH. The population was entirely obstetric, and the surgery and local anesthetic agent used were standardized. The only significant variable was obesity. In this study, Lower Body mass index (BMI) has been shown to be conclusively associated with higher risk of PDPH. This may be because of the large abdominal panniculus acting like an abdominal binder and raising the intra-abdominal pressure, thus, reducing the rate of leak of CSF through the dural defect.

**Conclusion**

Post-dural puncture headache is a complication that should not to be treated lightly. There is the potential for considerable morbidity. Though in the majority of cases, the problem will resolve spontaneously. In some patients, the headache lasts for months or even years. In conclusion, spinal anaesthesia with 27-gauge Quincke needle was associated with a higher degree of satisfaction in obese patients, with a significantly lower incidence of PDPH.

**References**