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CLINICAL AND SOCIODEMOGRAPHIC CHARACTERISTIC OF PATIENTS REFERRED FROM EMERGENCY DEPARTMENT TO PSYCHIATRY: A RETROSPECTIVE CROSS-SECTIONAL STUDY

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Abstract

Background: *Emergency departments (EDs) serve as critical entry points for individuals experiencing acute psychiatric crises. Understanding the clinical and sociodemographic characteristics of these patients is essential for improving emergency psychiatric care delivery.*

Objective: *To analyze the clinical and sociodemographic characteristics of patients referred from the Emergency Department to Psychiatry at Khyber Teaching Hospital, Peshawar, and examine correlations between demographic factors and clinical presentations.*

Methods: *A retrospective cross-sectional study was conducted over six months at Khyber Teaching Hospital, Peshawar. Data from 384 patients referred from the ED to psychiatry were analyzed using descriptive and inferential statistics. Sociodemographic variables and clinical presentations were examined for associations.*

Results: *The majority of patients were male (62.8%), aged 25-35 years (38.5%), and from urban areas (71.4%). Depression was the most common diagnosis (31.2%), followed by anxiety disorders (24.7%) and psychotic disorders (18.8%). Sleep disturbances were the most frequent presenting complaint (22.9%). Significant associations were found between gender and diagnosis type ($p<0.001$), age and severity of presentation ($p<0.05$), and socioeconomic status and treatment outcomes ($p<0.01$).*

Conclusion: *This study provides crucial insights into psychiatric emergency presentations in a Pakistani tertiary care setting, highlighting the need for targeted interventions and improved resource allocation for emergency psychiatric services.*

INTRODUCTION

Spinal anesthesia is a type of regional anesthesia that involves the injection of a local anesthetic into the spinal fluid surrounding the spinal cord, typically in the lower back (lumbar region), to produce numbness, muscle relaxation, and pain relief in the lower abdomen, legs, and pelvis. Spinal anesthesia is also known as intrathecal anesthesia or subarachnoid block. This approach provides effective pain relief while minimizing impact on the rest of the body's circulatory system. [(1)]. on the other hand, the major

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disadvantage of spinal anesthesia is that it is very difficult to predict height of block, extent and the level of spread after the injection. It varies patient to patient primarily depending on local anesthetic agent properties, position of the patient along with the level of prick [2, 3]. Blocks that involve segments higher than desired put the patients on risk of complications associated with either higher spinal or total spinal anesthesia. Thus, extreme care must be taken while performing such blocks. Its importance has further strengthened among obstetric population presenting for the cesarean sections, because of enhanced intra-abdominal pressure thus causing more cephalad spread of the local anesthetic drug, thus causing higher incidence of complications [4], cesarean section is usually performed via lower segment of the uterus (LSCS).It seems that only the nerves supplying the lower abdomen should be blocked in order to carry out such operations. But the dermatomal innervations and manipulation of the structures attached with uterus during the procedure risks surgical complications and primarily the pain, during this procedure [5, 6]. In keeping this anatomical distribution, a minimal sensory block up to T4-T5 has been recommended to carry out cesarean section without putting the patient in pain and further associated complications related with the procedure[7]. Theoretically and most of the times practically, blocks up to the T4 sensory levels provide adequate anesthesia to conduct the operation comfortably, but some peritoneal innervations still may get spared thus causing feeling of slight pain during the procedure[8]. Patients counseling, reassurance, coordination of the surgeons and finally supplemental analgesia may prevent such minor discomfort during the operation [9]. The technique of anesthesia for cesarean section depends on indications of cesarean, its urgency, physical status of the patient and the preference of patient and surgeon [8, 9]. Regional anesthesia is more preferred because of less risk of gastric aspiration, failed intubation and depressant effects of anesthetic drugs on fetus [10] Hyperbaric bupivacaine is one of the commonly administered spinal anesthetic agents for caesarean section that is associated with significant maternal hypotension [11]. The magnitude of problem is very high with conventional dose of 12-15 mg hyperbaric bupivacaine with reported incidence of 69% to 80% [12]. Adjusting the appropriate dose of hyperbaric bupivacaine will produce effective surgical anesthesia with minimal maternal and neonatal side effects [13]

"Using a lower dose of hyperbaric bupivacaine in spinal anesthesia has been shown to have several advantages over traditional dosing. These benefits include improved stability in maternal blood pressure and circulation, as well as increased patient satisfaction due to reduced motor duration blockage and shorter of numbness. This approach can lead to better outcomes for mothers undergoing spinal anesthesia [14]. Maternal hypotension is the most frequent complication of spinal anesthesia with incidence approaching 90% Untreated severe hypotension can pose serious risks to both mother (unconsciousness, pulmonary aspiration, apnea, or even cardiac arrest) and baby (impaired placental perfusion leading to hypoxia, fetal acidosis, and neurological injury). Although there is some variation, most workers define hypotension as a maternal systolic blood pressure below 70% to 80% of baseline recordings, an absolute value of less than 90 mmHg to 100 mmHg, or both [15].

The objective of study was to evaluate whether the administration of 12mg of 0.75% bupivacaine was helpful than 15mg of 0.75% bupivacaine in reducing maternal hypotension in spinal anesthesia during caesarean section. The results, which obtained from this study, will help us for preventing hypotension in these patients who undergoes for elective caesarean section under regional anesthesia and to avoid harmful medication like volume overload and use of vasopressors for correction of drug-induced hypotension [16].

Materials and Methods

The objective of this randomized controlled study was to compare the frequency of maternal hypotension following spinal anesthesia with 12 mg versus 15 mg of 0.75% bupivacaine in elective caesarean sections. Conducted in the Department of Anesthesiology, AIMS AJK Muzaffarabad, from April to September 2024, the study included 100 patients aged 20–45 years with ASA physical status I or II. Spinal anesthesia was administered at the L3-L4 intervertebral space. Patients were excluded if they had uncontrolled systemic diseases (e.g.,

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hypertension, diabetes, cardiac conditions), were undergoing emergency procedures, had allergies to bupivacaine, or met other exclusion criteria such as coagulopathy, infection at the injection site, hypovolemia, increased intracranial pressure, abnormal block levels, extreme weight, or ASA status III or higher. Informed consent was obtained from all participants prior to enrollment.

RECOMMENDATIONS

Administration of 15mg of 0.75% Bupivacaine via spinal dosing may lead to significant hypotension in patients undergoing elective caesarean section under spinal a anesthesia. To minimize this risk, our findings suggest that using a dose of 12mg Bupivacaine may help prevent significant hypotension. Moreover, this approach can also help avoid the need for harmful medications, such as excessive fluid administration (volume overload) and vasopressors, which are used to correct drug induced hypotension. By using the optimal dose of Bupivacaine, we can provide a safer and more effective anesthetic technique for our patients.

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