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Spinal Anaesthesia for Caesarean Delivery in a Parturient with Kypho-Scoliosis: A Case Report

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Background: Kypho-scoliosis is a spinal abnormality characterized with anterior and lateral deformities as well as cardiopulmonary compromise. These abnormalities, coupled with the physiological changes in pregnancy make the obstetric anaesthetic management of a parturient with kypho-scoliosis a challenging, yet a unique condition. Use of general anaesthesia poses risks of difficulties in positioning, airway management and cardio-pulmonary depression, while instituting a neuraxial block remains technically difficult.

Case Report: A 24-year-old, booked primiparous woman with severe kypho-scoliosis and twin gestation in her third pregnancy who underwent caesarean delivery under spinal anaesthesia, following a multidisciplinary management.

The patient, weighing 50kg, with a height of 135cm, booked her pregnancy at 12 weeks estimated gestational age (EGA). Due to the multiple obstetric and anaesthetic risks, the managing team planned a caesarean delivery for 36 weeks EGA. The pregnancy was relatively uneventful and at 36 weeks, she was booked for caesarean delivery under spinal anaesthesia. Preoperatively, she remained stable and had anaesthesia instituted with 10mg heavy bupivacaine. After a sensory blockade up to T8, the surgery commenced and she was delivered of a twin girl and boy with APGAR score 8¹,9⁵, birthweight 1.9kg and 7¹ 8⁵, birthweight 2.0kg respectively. The intra-operative and post-operative periods were uneventful and she was discharged home after two weeks.

Conclusion: Anaesthetic management of parturient with kyphoscoliosis for caesarean delivery is challenging. However, with proper planning, spinal anaesthesia can be a safer alternative option.

Keywords: Submental intubation, Difficult airway, Mandibular fracture, Intermaxillary fixation, Kypho-scoliosis.

Spinal Anaesthesia for Emergency Caesarean Section in a Parturient with Thyroid Storm

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Background: Thyroid storm is a rare, life-threatening endocrine emergency that can complicate pregnancy and significantly increase maternal and foetal risk. It presents unique anaesthetic challenges, particularly in emergency obstetric surgery, where optimization time is limited. The aim of this report was to describe the anaesthetic management of a parturient in thyroid storm undergoing Caesarean section under subarachnoid block and mild sedation.

Method: The patient was preloaded with 650 ml of normal saline and subarachnoid block was achieved using 10mg of hyperbaric bupivacaine. Sedation was instituted using 40 mg of Propofol. Non-invasive blood pressure, SpO₂, pulse rate, electrocardiogram and temperature were monitored intraoperatively.

Result: The surgery lasted 75 minutes and was successful with stable vital signs. The neonate had APGAR scores of 5, 7 and 9 in the 1st, 5th and 10th minutes, respectively. She was then transferred to the intensive care unit. Her postoperative recovery was uneventful.

Conclusion: This case highlights the feasibility of spinal anaesthesia in thyroid storm patients undergoing emergency Caesarean delivery when general anaesthesia poses higher risks.

The role of perioperative multidisciplinary approach, preoperative optimization, vigilant intraoperative monitoring and postoperative care in a critical care setting cannot be overemphasized.

Keywords: Thyroid storm, Emergency Caesarean section, Subarachnoid block.

Haemorrhagic Obstetric Cases under Sab – Between the Devil and the Deep Blue Sea

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Background: Subarachnoid block (SAB) has remained the preferred anaesthetic technique for lower abdominal surgeries including Caesarean sections. SAB being easier and safer in the hands of most anaesthetists, compared to General Anaesthesia, especially in parturients. It is however contraindicated in potentially haemorrhagic/haemorrhagic cases. This is due to the fear of worsening SAB induced hypotension with acute hypovolaemia. However, full general anaesthesia could be a daunting task in the face of oxygen scarcity.

Aim: The aim is to report series of cases in favour of the possibility and safety of intrathecal block for Caesarean deliveries in potentially haemorrhagic/haemorrhagic pregnancies in the face of scarcity of oxygen.

Methods: Three parturients booked for Caesarean sections on account of abruption placenta and placenta praevia Type IV had their surgeries carried out under SAB in a tertiary facility during a period of oxygen scarcity. Pre-anaesthetic assessment, optimization, choice of anaesthetic technique, intraoperative monitoring, fluid therapy, losses, replacement, maternal and neonatal outcomes were recorded and reviewed.

Results: The 3 cases were carried out under SAB. One of them required deep sedation due to an extended period of surgery, for hysterectomy following atony. Fluid co-loading and vasopressors were used to maintain the haemodynamics. All 3 had blood transfused intra/postop. Oxygen consumption was minimal.

Conclusion: SAB is a feasible, oxygen conserving technique for Caesarean section in potentially haemorrhagic/haemorrhagic parturients, especially in resource constraint setting.

Keywords: Haemorrhagic, Caesarean section, Subarachnoid block, Oxygen scarcity.

Undiagnosed Abdominal Pregnancy at Term: A Case Report

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Background: Abdominal pregnancy is defined as pregnancy occurring anywhere within the peritoneal cavity, exclusive of tubal, ovarian or broad ligament locations. It is a rare form of ectopic pregnancy with high morbidity and mortality for both the mother and the foetus.

Case Report: A 36-year-old woman with gestational age 37 weeks + 2 days was referred from a peripheral hospital, with complaints of abdominal pain of 3 hours prior to presentation. Patient had previous Caesarean section done 4 years ago. Examination findings revealed generalized abdominal tenderness with difficulty assessing foetal poles. Foetal heart rate was 109 beats/minute. A diagnosis of foetal distress with suspected uterine rupture was made. Exploratory laparotomy performed revealed abdominal pregnancy with massive haemoperitoneum and a fresh still birth neonate.

Conclusion: Abdominal pregnancy remains inadequately diagnosed in developing countries. It is necessary to increase awareness among pregnant women on the importance of high-quality antenatal care, including early obstetric ultrasound scan as well as training and retraining of health care professionals.

Keywords: Abdominal pregnancy, Post-partum haemorrhage, Ectopic pregnancy.

Inadvertent Intrathecal Catheterization during a Blind CSE:

A Case Report

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Background: Neuraxial block is used for majority of Caesarean sections. Combined spinal epidural (CSE) anaesthesia gives the advantage of the quick onset of the spinal component and extended duration of anaesthesia with the epidural, especially, in anticipated prolonged surgical exposure and adequate postoperative pain management. We report a case of inadvertent catheterization during a CSE for Caesarean section, its recognition and management.

Case Presentation: A 38yr old G2P1 was booked for repeat Caesarean section and hernioplasty of a giant incisional hernia containing the growing uterus. Patient had been on bed rest for 3 months prior due to ulceration of the herniated abdominal wall. A CSE was performed for the surgery and postoperative pain management. Following catheterisation of the epidural space, about 2-3 drops of clear fluid was noted to flow back in the catheter. However, catheter aspiration and test dose were negative. A high spinal block up to dermatomal level T5 was observed and this increased the suspicion of intrathecal catheterization. This test dose was sufficient for the surgery. Postoperatively, catheter was removed and patient was managed with parenteral and suppository analgesics. No further sequel was observed.

Conclusion: High index of suspicion and precautions can help avoid serious complications in cases of inadvertent catheterization of the intrathecal space during CSE.

Keywords: Inadvertent, Intrathecal, Catheterization, High spinal block.

Prevalence of the Aversion for Caesarean Sections by Antenatal Clinic Attendees: A Study in one Teaching Hospital in Nigeria

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Background: Caesarean section (C-Section) is a critical life-saving surgical procedure for maternal and neonatal complications. Despite its medical importance, there is a significant and well-documented aversion to it in many low- and middle-income countries, including Nigeria. This study was to determine the aversion for Caesarean section by antenatal clinic attendees at the Rivers State University Teaching Hospital (RSUTH).

Method: This was a prospective cross-sectional study conducted over six (6) months period at the RSUTH. All consecutive subjects were recruited for the study. Patients gave informed consent for the study. Using SPSS version 25, the drivers for the aversion were entered into a spreadsheet and the prevalence was calculated chi-square tests and logistic regression analyses used to identify the key determinants (e.g., education level, parity, income, cultural beliefs and other factors) most strongly associated with the aversion.

Results: A total of 386 subjects were recruited. The booked respondents were 208 (53.9%) and 178 (46.1%) were un-booked. The mean age was 31±3.5years. The modal parity was 2. Out of a total of the number of women studied, 5 (1.3%) had no formal education, 12 (3.1%) primary education, 176 (45.6%) secondary education, 193 (50.0%) had a tertiary education. One hundred

and fourteen (29.6%) of the subjects had aversion for Caesarean sections, of which 77 (20%) were un-registered patients while 37 women had regular antenatal care. The reasons for aversion were socio-cultural stigma 50 (43.9%), fear of anaesthesia 34 (29.8%) religious 16 (14.0%), and economy 14 (12.3%).

Conclusion: The aversion to Caesarean sections among antenatal attendees in Rivers State is a significant public health issue with deep socio-cultural and economic roots, and fear of anaesthesia. Its prevalence is very high and acts as a barrier to accepting essential obstetric care. A further systematic study to quantify this aversion and understand its drivers needs to be done.

Keywords: Prevalence, Aversion, Caesarean section, Antenatal clinic.

Effect of three different Prophylactic Bolus Doses of Phenylephrine on Hypotension following Caesarean Section under Combined Spinal-Epidural Anaesthesia

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Background: Maternal hypotension is a frequent and potentially serious complication of spinal anaesthesia during Caesarean section. Phenylephrine is a commonly used vasopressor for prevention, but optimal dosing remains uncertain. This study was aimed at evaluating the effectiveness of three prophylactic bolus doses of phenylephrine in preventing spinal-induced maternal hypotension during elective Caesarean section under combined spinal-epidural anaesthesia.

Methodology: A prospective comparative study at the University of Port Harcourt Teaching Hospital included 136 parturients scheduled for elective Caesarean section. All received an admixture of intrathecal 10 mg of 0.5% hyperbaric bupivacaine and 25 µg fentanyl. Participants were randomly assigned to four groups: a control group receiving normal saline and three intervention groups receiving 50 µg, 60 µg, or 80 µg of phenylephrine. Haemodynamic parameters were monitored every five minutes. Total phenylephrine used and neonatal Apgar scores were recorded.

Results: Demographic characteristics were comparable across groups. The incidence of hypotension was highest in the saline group (85.5%) and lowest in the 80µg group (10.0%). Differences in hypotension rates were statistically significant between the 80 µg and saline group ($p < 0.0001$), and between other dose comparisons. Bradycardia was more frequent in the 80µg group (20.6%) ($p = 0.030$). Apgar scores were similar across groups, though umbilical cord venous pH was significantly lower in the saline group ($p < 0.0001$).

Conclusion: Prophylactic bolus doses of phenylephrine, particularly 80 µg, are effective in preventing spinal-induced maternal hypotension but with a relatively higher incidence of bradycardia during Caesarean section without adverse neonatal outcomes.

Keywords: Caesarean section, Hypotension, Phenylephrine, Combined spinal epidural block, Prophylactic.

Effect of Intrathecal Single Dose Clonidine-Bupivacaine-Fentanyl Admixture Versus Bupivacaine-Fentanyl only on Labour Pain

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Background: Labour pain is excruciating and analgesic intervention following single-dose intrathecal local anaesthetic is short-lived, necessitating search for suitable adjuvants. This study was undertaken to evaluate the effects of clonidine addition to single dose intrathecal bupivacaine-fentanyl admixture on labour pain.

Method: Following approval, 134 consenting randomized parturients received, intrathecally, either clonidine 25µg, bupivacaine 2.5mg and fentanyl 25µg (group A = 67) or

bupivacaine 2.5mg and fentanyl 25µg (group B = 67). Maternal blood pressure, sensory/motor block, pain, duration of active phase, labour and neonatal outcome were recorded. $P < 0.05$ was considered significant.

Results: Group A rather than B, had longer mean duration and faster onset of effective analgesia (170.0 (20.5) versus 108.7 (19.9) minutes; $P = 0.001$), and (3.6 (1.1) versus 4.9 (0.3) minutes; $P = 0.001$), respectively, and longer time to Bromage 6 ($P = 0.001$). APGAR scores at 1st and 5th minute ($P = 0.16$ and $P = 0.405$ respectively), mean umbilical arterial pH ($P = 0.342$), active labour duration ($P = 0.905$) and labour outcome ($P = 0.052$) were similar.

Conclusion: Compared to group B, group A achieved significantly faster onset, longer duration of effective analgesia and motor block; active labour duration, labour and neonatal outcomes were similar, with minimal side effects.

Keywords: Bupivacaine, Clonidine, Fentanyl, Intrathecal labour analgesia.

A Retrospective Cohort Study on the Impact of Oxytocin and Carbetocin on Trend of Blood Transfusion needs following Caesarean Delivery

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Background: The risk for significant blood loss from uterine atony, a leading cause of maternal mortality, is increased by Caesarean; therefore, a review of uterotonic efficacy is required. The aim of this study was to analyze the efficacy of carbetocin versus oxytocin in reducing postpartum blood loss and transfusion need of parturients undergoing Caesarean, in University of Port Harcourt Teaching Hospital (UPTH).

Method: Approval secured, a 10-year review of Caesarean deliveries was done from January 2015 to December 2024. Data of blood transfusions in parturients during or after Caesarean was obtained from the Obstetric theatre, Recovery, Postnatal Ward, Anaesthetic and Intensive Care Unit Registers in UPTH.

Results: Out of 5,684 Caesarean 3,427 had oxytocin and 2,257 received carbetocin. Mean blood loss (range: 699.2 ± 207.7 - 706.9 ± 218.1 versus 437.2 ± 112.8 - 576.7 ± 167.1), proportion (%) of parturients with blood loss $> 1000\text{ml}$ (range: 4.5 - 6.9 versus 0.0 - 3.6) and needed transfusion (range: 4.1 - 7.7 versus 1.1 - 2.9), including additional uterotonic use (42.95 versus 9.39) was greater with oxytocin. Similarly, bradycardia (2 versus 9) and hypotension (33 versus 550) occurred more with oxytocin.

Conclusion: Comparatively less postpartum blood loss, transfusion, additional uterotonic use, occurrence of bradycardia and hypotension, were observed with carbetocin administration than with oxytocin, during Caesarean.

Keywords: Blood loss, Caesarean section, Carbetocin, Oxytocin, Blood transfusion.

A 10-Year Retrospective Study of Caesarean Delivery Trend at a Tertiary Hospital in Tanzanian

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Background: Caesarean delivery also known as Caesarean section (CS) is an essential life-saving strategy for both women and newborns but its current overuse constitutes a global health problem. In 1985, the WHO set a maximum CS rate (CSR) of 10% to 15%, beyond which there is no justification for better maternal and neonatal outcomes. This may not be the case in a tertiary facility like Muhimbili National Hospital (MNH) where high risk patients are referred for experts' care.

Methodology: This was a 10-year retrospective study of Caesarean deliveries conducted at the Muhimbili National

Hospital in Tanzania. Data of all women who underwent both CS and vaginal births between 2014 and 2023 were consecutively collected from patients' registries by using a pre-tested checklist and later analysed using an SPSS software version 20 (SPSS, Inc. USA). Caesarean deliveries were added to vaginal births to obtain total deliveries. CSR was obtained by dividing the number CS by the number of total deliveries.

Results: Between 2014 and 2023 there were 65,094 deliveries, of which 34,064 were by CS resulting into an institutional CS rate of 52.3%. CS rate increased from 46.3% in 2014 to 65.2% in 2023. Majority of women were in the age group 20-34 years (73%), compared to 23% advanced maternal age and 4.1% teenagers. About 68% of parturients were multiparous while 30% underwent primary caesarean sections. About two-third (68%) of the CS were done on emergency basis. 92% of CS were done under single shot spinal anaesthesia. Previous uterine scar was the most frequent indication for CS (44.4%), followed by prolonged labour (13.5%).

Conclusion: Caesarean delivery rate at MNH is very high, about four-fold the maximum figures recommended by the WHO. The high CS rate was largely contributed to by the high volume of emergency procedures performed for repeat CS.

Keywords: Caesarean delivery, Caesarean section rate, Retrospective study.

Comparison of Normal Saline and Ringer's Lactate Preloading for Prevention of Maternal Hypotension during Spinal Anaesthesia for Caesarean Section: A Randomized Controlled Trial

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Background: Fluid preloading before spinal anesthesia is a standard practice in Caesarean section to prevent spinal-induced hypotension. Normal saline (NS) and Ringer's lactate (RL) are the most commonly used crystalloids, but their relative effectiveness remains debated. Recent evidence suggests that NS may provide more stable haemodynamics and better acid-base balance in specific clinical contexts. This study aimed to compare the effectiveness of NS and RL in preventing maternal hypotension during Caesarean sections under spinal anesthesia, with a focus on haemodynamic stability, vasopressor requirement, and neonatal outcomes.

Methods: In this prospective, randomized controlled trial, 120 ASA II parturients undergoing elective Caesarean section under spinal anaesthesia were enrolled. Participants were randomized into two groups of 60 each: the NS group received 15 mL/kg NS preloading, and the RL group received 15 mL/kg RL. Blood pressure and heart rate were recorded at baseline and at regular intervals up to 30 minutes post-spinal block. Hypotension was defined as a $> 20\%$ decrease from baseline systolic blood pressure and treated with intravenous ephedrine. Apgar scores at 1 and 5 minutes and any maternal side effects were recorded.

Results: Incidence of hypotension was significantly lower in the NS group (15%) compared to the RL group (35%) ($p < 0.05$). Mean systolic and diastolic blood pressures were more stable in the NS group, with fewer vasopressor interventions required ($p < 0.01$). Apgar scores were comparable between groups, and no adverse neonatal outcomes were recorded. Maternal side effects were minimal and similar in both groups.

Conclusion: NS was superior to RL in reducing the incidence of spinal-induced hypotension during Caesarean section, maintaining more stable haemodynamics, and reducing vasopressor use without compromising neonatal outcomes. NS may be considered the preferred crystalloid for preloading in elective obstetric spinal anaesthesia, although further multicentre trials are warranted to confirm these findings.

Keywords: Normal saline, Ringer's lactate, Caesarean section, Spinal anaesthesia, Hypotension, Maternal haemodynamics.

Effect of Application of Lower Limb Venous Compression on Maternal Blood Pressure during Caesarean Section under Spinal Anaesthesia

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Background: Maternal hypotension from spinal anaesthesia poses significant risks warranting continued search for effective prophylaxis. The aim of this study was to determine the effects of knee-high (KH) versus thigh-high (TH) sequential compression stockings (SCS) application on maternal blood pressure during Caesarean under spinal anaesthesia.

Methods: Ethical approval secured, 150 consenting parturients aged 18 - 45 years, of American Society of Anesthesiologists class II, for elective Caesarean, randomized into KH, TH, and control (CT) groups, of 50 each, wore knee-high (group KH), thigh-high (group TH) SCS including sham stockings, and sham stockings only (group CT). Following SCS inflation to 30-40mmHg bilaterally, and 15ml/kg 0.9% normal saline pre-loading, parturients received 2ml hyperbaric bupivacaine 0.5% plus 25µg fentanyl, intrathecally; maternal heart rate and blood pressures were recorded. $P < 0.05$ was considered significant.

Results: All 150 parturients completed the study. Hypotension occurred greatest [44 (37.9%)] in group CT, followed by group KH [40 (34.5%)] and least [32 (27.6%)] in group TH, $p < 0.001$, with significantly greatest ephedrine consumption in group CT, $p = 0.008$.

Conclusion: Knee-High and Thigh-High SCS application significantly reduced the occurrence of maternal hypotension during Caesarean under spinal anaesthesia, with superiority of TH to KH, and minimal side effects.

Keywords: Caesarean section, Hypotension, Sequential compression stockings, Spinal Anaesthesia.

Determinant, Profile and Outcome of Obstetric Critical Care at Ile-Ife, Nigeria: A Five-Year Experience

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Background: Despite global advances in obstetric care, outcomes in LMICs remain poor. Profiling these cases is vital for guiding prevention and improving outcomes.

Method: This retrospective study analysed the obstetric cases requiring ICU admission at the Obafemi Awolowo University Teaching Hospitals Complex (OAUTHC), Ile-Ife, Nigeria over a five-year, i.e., January 2020 to December 2024. Data were collected retrospectively from the ICU records, and patient folders. Descriptive statistics were used to analyse data.

Result: Out of 4,223 deliveries (57.2% CS, 42.8% SVD), 48 (1.2%) required ICU admission, comprising 32 (66.7%) CS and 16 (33.3%) SVD cases. The mean age was 30.8 ± 6.6 years. Indications were severe preeclampsia and eclampsia 28 (58.3%), sepsis 8 (16.7%), haemorrhage 5 (10.4%), sickle cell crises 4 (8.3%), and acute cardiac decompensation 1 (2.1%). The median ICU stay was 3 (IQR 2–6) days. Mechanical ventilation was indicated in 23 (47.9%), vasopressors 12 (25.0%) and blood transfusions in 14 (29.2%). There were 22 (45.8%) mortality. Acute cardiac decompensation and septic abortion had 100% mortality.

Conclusion: The high mortality noted demand improved preventive strategies and obstetric critical care capacity in Nigeria

Keywords: Obstetrics, Intensive care unit, Maternal morbidity, Maternal mortality.

Maternal and Neonatal Outcomes in IVF Pregnancies: Experience from a Private Obstetric Hospital in Port Harcourt

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Background: Pregnancies conceived through in vitro fertilization (IVF) are associated with higher risks of obstetric complications compared to spontaneous conceptions. Understanding maternal and neonatal outcomes is essential for optimising peripartum care in such cases. This study aimed at evaluating the maternal and neonatal outcomes of IVF pregnancies delivered in a private hospital in Port Harcourt.

Methods: A retrospective analysis of case records of IVF-conceived pregnancies delivered between 2020 and 2024. Data extracted included maternal age, parity, mode of delivery, obstetric complications, and neonatal outcomes.

Results: A total of 52 IVF pregnancies were reviewed. The mean maternal age was 36.2 ± 4.5 years. Caesarean section accounted for 86.5% of deliveries, while vaginal birth occurred in 13.5%. Maternal complications included intraoperative hypotension (18.3%), postpartum haemorrhage (9.6%), and wound sepsis (5.8%). Neonatal outcomes were generally favourable, with 87.5% of babies recording APGAR scores ≥ 7 at 5 minutes. Preterm delivery accounted for 12.5% of NICU admissions.

Conclusion: IVF pregnancies in this setting were characterised by advanced maternal age, high caesarean delivery rates, and notable maternal and neonatal complications. Strengthening multidisciplinary care and improving neonatal support services are essential to optimise outcomes.

Keywords: In-vitro fertilisation, Maternal outcomes, Neonatal outcomes, Caesarean section, Nigeria.

Anaesthetic Management and Perioperative Challenges in IVF Pregnancies: A Retrospective Review in Port Harcourt

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Background: IVF pregnancies present unique anaesthetic considerations, often complicated by advanced maternal age, multiple gestations, and pre-existing comorbidities. Careful anaesthetic planning is crucial for safe maternal and neonatal outcomes.

Aim: To review anaesthetic techniques, perioperative challenges, and outcomes in women with IVF pregnancies undergoing delivery in a private hospital in Port Harcourt.

Methods: Retrospective review of IVF pregnancies delivered between January 2019 and June 2024. Information obtained included anaesthetic technique, intraoperative complications, conversion rates, and perioperative outcomes.

Results: Sixty-four IVF-conceived pregnancies were analysed. Spinal anaesthesia was the predominant technique (79.7%), followed by general anaesthesia (12.5%) and combined spinal-epidural (7.8%). Intraoperative challenges included maternal hypotension (20.3%), difficult neuraxial placement (6.2%), and failed spinal block requiring conversion to general anaesthesia (3.1%). Difficult airway management occurred in 4.7% of cases. Neonatal outcomes were favourable in 91.0% of cases, with only 9.0% requiring NICU admission.

Conclusion: Anaesthetic care of IVF pregnancies is associated with specific challenges, including increased rates of neuraxial difficulty and perioperative hypotension. Adequate preparation, early anticipation of complications, and skilled anaesthetic support are critical to ensuring safe outcomes for both mother and neonate.

Keywords: Anaesthesia, In-vitro fertilisation pregnancies, Perioperative care, Obstetric anaesthesia, Port Harcourt.

