A COMPARATIVE STUDY BETWEEN ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOLS AND CONVENTIONAL PROTOCOLS IN ELECTIVE CAESAREAN DELIVERIES

By

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MASTER OF SURGERY

OBSTETRICS AND GYNAECOLOGY

ABBREVATIONS

S.No	ABBREVATION	EXPANSION
1	C S	CESAREAN SECTION
2	ERAS	ENHANCED RECOVERY AFTER SURGERY
3	FTS	FAST TRACK SURGERY
4	ERP	EARLY RECOVERY PROGRAM
5	PANS	PERIPHERL AUTONOMIC NERVOUS SYSTEM
6	BMR	BASAL METABOLIC RATE
7	VBAC	VAGINAL BIRTH AFTER CESAREAN
8	NSAIDS	NON-STEROIDAL ANTI-INFLAMMATORY DRUGS
9	NICU	NEONATAL INTENSIVE CARE UNIT
10	LSCS	LOWER SEGMENT CESAREAN SECTION

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ABSTRACT

BACKGROUND:

Enhanced recovery after surgery (ERAS) is a concept that combines various evidence-based aspects of perioperative care to accelerate patient recovery. It standardises perioperative management and achieves a reproducible improvement in the quality of care. Caesarean Section surgery is one of the most common major surgeries in the world. Caesarean section birth has been linked to prolonged hospitalisation compared to spontaneous, and a majority of the patients had to remain in the hospital for a minimum of four days post a scheduled Caesarean operation. The handling of caesarean and postoperative care placed a significant strain on the country's maintenance and costs.

AIMS AND OBJECIVES:

The primary objective is to compare 'Duration of hospital stay' between both groups.
The secondary objective is to know the time interval of Oral intake, mobilisation and time interval of removal of Bladder catheter after surgery, patient satisfaction score, patient pain score, monitoring Intra-op and post-op nausea and vomiting

MATERIALS AND METHODS:

- Women admitted in Department of OBSTERTICS & GYNAECOLOGY in B.L.D.E. (DEEMED TO BE UNIVERSITY) Shri B.M. Patil Medical College Hospital and Research Centre, Vijayapura fulfilling the inclusion criteria , women undergoing elective cesarean section

- The women will be informed about study in all respects and informed written consent will be obtained.

STUDY PERIOD: JANUARY 2021 TO APRIL 2022

METHOD OF STUDY: CLINICAL OBSERVATIONAL STUDY

RESULTS: A total of 160patientsfulfilling the inclusion criteria of included in the trial and randomized into ERAS group 80 women and conventional group 80 women . In our study age comparison, the mean age among ERAS group was 26years and among conventional group was 25.3years. In our study 95% of women in ERAS group received the preoperative carbohydrate loading. In these women postoperatively there was reduced thirst , hunger .Thus carbohydrate loading preoperatively had proved benefit .

In our study among the ERAS group women pain scores were less , which was due to the combined benefit of paracetamol and NSAIDS together . In our study the mean duration of time interval of removal of catheter from time of surgery in ERAS group was 8hrs . In these women we have noticed decreased duration of time of ambulation from surgery , decreased incidence of UTI and decreased duration of hospital stay.

In our study the time of first ambulation among ERAS group was 9hrs and in conventional group it was 27hrs. In spite of the limitations ERAS group women were discharged in 4days wen compared to conventional group women who were discharged after 7days

CONCLUSION: It is known that in conventional protocols patient satisfaction rate are less and post operative difficulties are more which is leading increased duration oh hospital stay and reduced postoperative recovery. This highlights the need for a better program like the ERAS protocols to improve the patient care. It is evident from the study conducted here that ERAS protocols proved a better patient satisfaction which led to early recovery and early

discharge when compared with the standard conventional protocols.

KEYWORDS: ERAS , conventional protocols

INTRODUCTION

Professor Henrik Kehlet, a gastrointestinal surgeon from Copenhagen who started the accelerated recovery after surgery (ERAS) initiative in Denmark in 2001, was the project's original creator. It was employed for colon surgery initially, but is now also used in gynaecological, urological, and orthopaedic surgery. It strives to ensure that patients are psychologically and physically well-prepared for surgery and to offer the finest perioperative care that decreases the stress of operation and enhances recovery. It makes use of a number of individual interventions that, when used together rather than singly, are more effective.

The term "accelerated patient recovery" (ERAS) refers to an approach that incorporates multiple evidence-based perioperative treatment components. It achieves a reproducible improvement in the standard of care while standardising perioperative management. One of the most often performed major operations worldwide is a Caesarean section. Increasingly, scheduled or elective procedures account for a majority of all caesarean sections. A majority of the patients had to stay in the hospital for at least four days after a scheduled Caesarean procedure. Caesarean section birth has been associated to longer hospital stays than spontaneous birth. The country's maintenance and costs were severely impacted by the management of caesarean and postoperative care.

London, UK's National Institute for Health and Care Excellence It is recommended that healthy healing women leave the hospital as soon as possible (within 24 hours) and receive follow-up care at home. Although surgical specialties and institutions have different ERAS protocols in place, the fundamental ideas are the same. These concepts call for

preoperative, intraoperative, and postoperative interventions. Preventing a postoperative gastrointestinal upset, early urinary catheter removal, maintaining normothermia, providing adequate pain relief, and early postoperative mobilisation are some strategies as per ERAS protocols that include: proper review of pre-conceptional information to future mothers, proper perioperative nutrition, adequate hydration, and use of minimally invasive surgical techniques whenever applicable.

Hence this study will help in identifying and understanding the effectiveness of ERAS protocol for early discharge from hospital.

AIMS AND OBJECTIVES OF STUDY

The **primary objective** - Study compares 'Length of stay in hospital' between both groups.

The **secondary objective** is to know the time interval of

1. Oral intake, mobilisation, and Time interval of removal of Bladder catheter after surgery
2. Patient satisfaction score.
3. Patient pain score.
4. Monitoring Intra-op and post-op nausea and vomiting.

REVIEW OF LITERATURE

Elles Steenhagen (2015) conducted a study 'Enhanced Recovery After Surgery-It's Time to Change practice, in their study they discussed about ERAS care pathway which help to attain early recovery after surgical procedures by decreasing the profound stress response and maintaining preoperative organ function following surgery and thus proposed the fundamental principles and elements of ERAS. (128)

Pilkington L (2016) of Royal Gwent hospital presented a poster on (1) Ensuring the patient is in the best possible condition for surgery. (2) Ensuring the patient gets the best possible management before, during and after her operation. They conducted audit of patient stay in hospital after elective C. S. To make sure the patient experiences the best possible rehabilitation, enabling early recovery and discharge from the hospital, allowing them to return to their normal activities quicker.

Hussein Elgohary et al., (2016) conducted a study on 80 patients who are managed using ERAS protocols and the data collected included compliance and operative data, postoperative complications, bowel recovery, length of ICU and hospital stay. Patients treated with ERAS protocols showed shorter postoperative hospital stay, and in terms of morbidity or mortality, the patients showed almost negligible risk. (130)

Ellena Corso et al., (2017) in their study of five clinical protocols which involved a total of 25 clinical components of which three elements were common to all five pathways (early oral intake, mobilisation, and removal of the catheter). Ten meta-analyses of multi-

component enhanced recovery after surgery (ERAS) demonstrated a reduction in length of hospital stay of between 1 to 4 days. (131)

George A Macones et al., (2017) studied that ERAS guidelines have created a pathway for postoperative care. Which include sham feeding, nausea and vomiting prevention, postoperative analgesia, nutritional care, glucose control, thromboembolism prophylaxis, early mobilisation, urinary drainage, ad discharge counselling proved beneficial results and early discharge with better recovery. (132)

Borislava Pujic et al., (2018) studies in Serbian hospitals(4 university teaching hospitals and 45 general hospitals) based on ERAS protocols conducted on patients with caesarean delivery showed uncommon use of antibiotic prophylaxis before skin incision, earlier oral intake, routine use of DVT prophylaxis, and earlier discharge from the hospital post CD compared to hospitals not reporting ERAS thus showing successes in speeding patient recovery, decreasing time to discharge from the hospital and improving patient outcomes. (133)

Sara taha Mostafa (2019) conducted a study that included 96 women and concluded that implementing ERAS protocols for women planned for elective C.S. is effective in controlling postoperative gastrointestinal symptoms, pain control, and encourages early Ambulation with an early resumption of intestinal motility, higher satisfaction, and fewer days of admission. (134)

Alper Basbug et al., conducted a prospective randomized controlled trial to compare postoperative catheter removal as early as 2hours and 12hours after elective C.S that included 134 women and concluded early removal has favoured early discharge and reduced length of hospital stay, urinary frequency and microscopic haematuria compared to another group. (135)

Nasrin jalilian and Mohammad Rasoul Ghandami conducted a randomized clinical trial to compare between postop early and late oral feeding after C.S in 140 women and they concluded that in early feeding group time of normal regular bowel function return, G.I complications that occur postoperatively have reduced, ultimately reducing the length of hospital stay. (120)

D K Bilku et al., conducted a systematic review of 17 randomised controlled trials of 1445 patients considering all that met inclusion criteria to know the exact effect of preoperative carbohydrate loading and they concluded that it improved the patient comfort postoperatively like hunger, thirst, anxiety and nausea and had a positive effect on the patient

ENHANCED RECOVERY AFTER SURGERY AND CONVENTIONAL PROTOCOLS

Cesarean section is one of the most widely performed major procedures in the world. C.S rates are drastically increased in developing countries over the last three decades .They are many complex reasons for these increasing rates , maternal request being one of the frequently mentioned reasons .Cesarean section can lead to morbidity in women post operatively, placental abnormalities in later pregnancies . C.S can lead to respiratory problems , less breast feeding and more chances of developing atopic diseases requires more resources when compared to vaginal delivery.

Cesarean section leads to increased length of hospital stay when compared with normal delivered women. C S and postoperative care has been a burden on the countries with respective to costs. Early recovery and discharge from hospital will significantly reduce the burden on the obstetrical units.

The ERAS protocols introduced for elective cesarean section which decrease the maternal morbidity, hospital admission time and make women resume their ordinary daily activities early. These protocols were initially introduced for prolonged surgeries but are widely accepted know in obstetrics.

ERAS

Enhanced recovery after surgery, ERAS are perioperative protocols used to treat patients in a tertiary Institution . This preoperative care regimen known as an "Early recovery program" (ERP) / a "Fast track surgery" (FTS). Any ERAS program is made up of a number of essential components, and its core tenet is to manage the surgical stress response to help patients heal more quickly and prevent postoperative problems [(1)].

ERAS PRINCIPLES

Conventional or traditional post-operative treatment places a strong emphasis on the patient's need for extended bed rest as well as bowel rest with acceptance of the surgical stress reaction. The ERAS procedure employs the best perioperative anesthetic, analgesic, and metabolic support in an effort to completely remove the surgical stress reaction. Maintaining the patient's preoperative state is the major goal, which also implies a faster recovery and return to regular functions. As a result, the patient recovers from major abdominal surgery more quickly, avoids postoperative complications, and spends less time in the hospital, which saves money on medical expenses [(1)].

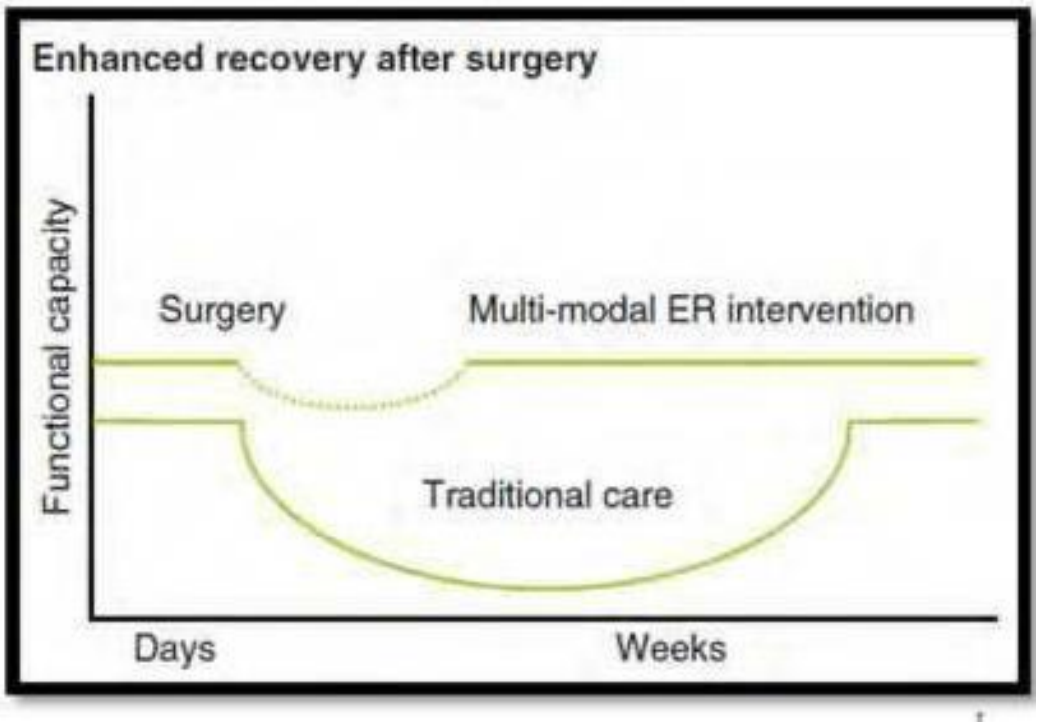


Fig-1 Conventional or traditional postoperative care exposes the patient to metabolic and nutritional impairment, delaying their recovery time. A multimodal ERAS stops these declines and enables a quick recovery for the patient. [2]

MAIN ELEMENTS OF ERAS

Any ERP is composed of a variety of components. A multidisciplinary team approach to patient treatment is one of these various and variable components.

Pre-admission education and counselling, carbohydrate loading and avoiding preoperative fasting, avoiding pre-anesthesia medications, short-acting anesthetic agents, early mobilization as per standard practice, non-opioid analgesia, and NSAIDS, prevention of postoperative nausea and vomiting, promotion of early gut motility with early enteral feeding, fast removal of catheters and drains, perioperative oral nutrition, and. other important factors are some of the key elements. [1]

ERAS SOCIETY

In actuality, the five university or specialty surgical departments from five countries in Northern Europe collaborated to form the ERAS association in 2001. Since then, comprehensive, detailed guidelines for the postoperative care of patients after gastrectomy, pancreaticoduodenectomy, and cystectomies have been published.[1]

HISTORY OF ENHANCED RECOVERY AFTER SURGERY/ERP

EVOLUTION OF MODERN SURGERY : PIONEERS

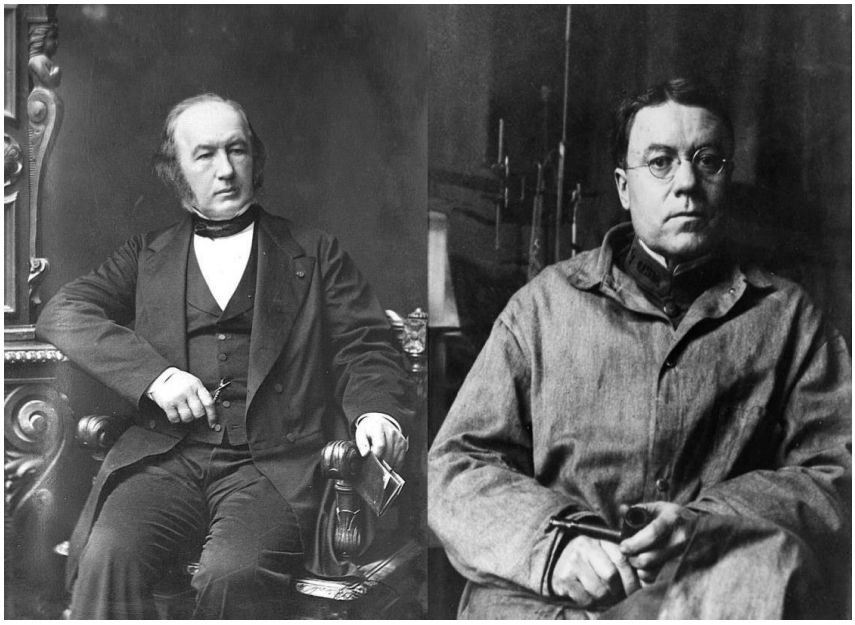


FIG NO 2 :

Claude Bernard (France) **Walter cannon (USA)**

They developed the concept of the "internal environment," or "MILIEU INTERIERUR," and they described the vital, sophisticated homeostatic reactions involving the brain, heart, lungs, nerves, kidneys, and spleen that operate continuously to protect the body.

SIR DAVID CUTHBERTSON FROM UK

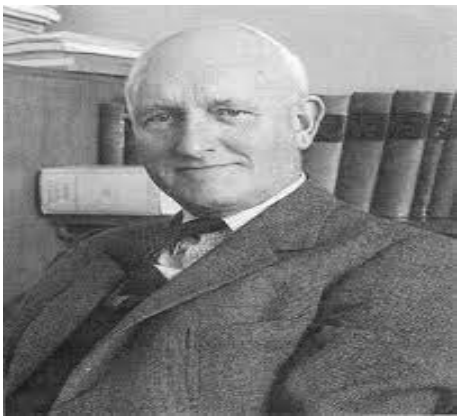


FIG NO -3

He developed Ebb and flow model by studying the metabolic response to damage.

Francis Moore and Doughlas Wilmore were primarily in charge of the mechanisms of optimal nutritional and metabolic support as well as the human response to injury.

HENRIK KEHLET

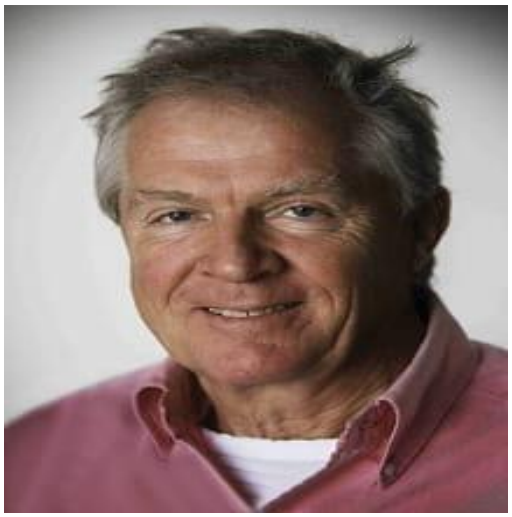


FIG NO -4

Henrik Kehlet started looking into the primary causes of big gastrointestinalprocedures—primarily colorectal surgeries—that resulted in protracted hospital stays.

He concluded that the main variables stopping patients from healing from simple abdominal procedures were colorectal and other major abdominal surgery was still 10-15 days.

1. Bed rest over an extended period of time due to immobility

2. Chronic pain treated with prolonged parenteral analgesia

3. Prolonged intravenous fluid therapy resulting from persistent gastrointestinal issues

Along with any postoperative issues that will lengthen the hospital stay even again. Considering these findings, Kehlet created a treatment pathway based on a "multimodal approach with appropriate pain relief, stress reduction with regional anesthesia, early nutrition, and early mobilization" to hasten recovery following large gastrointestinal/colonic resection. He did this to demonstrate improvements in his physical stamina, body composition, lung function, and length of hospital stay.

Professor H. Kehlet released a study on the multimodal approach to control postoperative pathophysiology and rehabilitation in 1997. This publication, which became a landmark work in the field of fast-track surgery, lay the groundwork for what is now a well-established and widely used clinical strategy to the treatment of patients during surgery. He stressed that, if surgical and anaesthetic technical failures are omitted, the surgical stress response—the body's natural defense mechanism that places a higher demand on organ function—is the primary source of postoperative morbidity.[1]

This is because other organizations have established their own "fast-track" or "Enhanced recovery program," which has had a similar amount of effectiveness in lowering problems and hospital stays. (1)

SURGICAL STRESS

During the perioperative period, the body is subject to physical injury, mechanical harm, and chemical changes. The body's response to these physiological impulses is hampered by surgery. The central neural system, the hypothalamus-pituitary-adrenal axis, and the peripheral autonomic nervous system are all activated by this (PANS).

Both of these systems offer the "stress response," an integrated response that controls physiological functions like heart rate, respiration, and metabolism. Additionally, they affect regular gastrointestinal function and suppress inflammatory and immunological responses. By altering the stress response with perioperative procedures like early aggressive resuscitation, wound closure, and restoration of normal anatomy, draining pockets of infection and administering early appropriate antibiotics, as well as providing cardiovascular, respiratory, metabolic, and nutritional supports, we can improve the outcomes of surgical management.

EBB AND FLOW MODEL : Describes the metabolic stress response brought on by surgery.

Any surgery or injury's natural reaction involves the following:

1. Immobility

2. Anorexia

3. Catabolization

Sir David Cuthbertson described - "EBB and flow" phases of the human metabolic response to injury in 1930[(2)].

The Ebb phase starts when the damage occurs and lasts for roughly 24-48 hours. It cannot be totally eradicated but can be diminished by appropriate resuscitation. Hypovolemia, a lower BMR, a lower cardiac output, hypothermia, and lactic acidosis are the hallmarks of the ebb phase. Catecholamine, cortisol, and aldosterone are the three main hormones that control the ebb phase by stimulating the renin-angiotensin system. The amount of blood loss and the stimulation of somatic afferent neurons at the site of injury determine the neuroendocrine system's size.

Ebb phase's primary physiological function is to preserve circulation volume and energy reserves for recovery and repair.

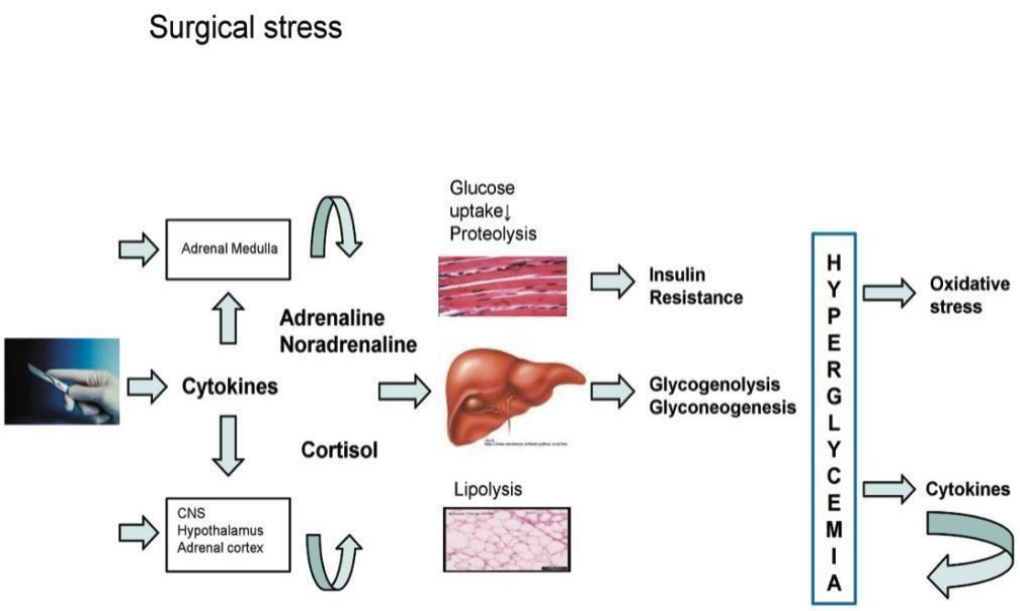


Fig-5 Metabolic stress induced by surgery

Reduced insulin sensitivity is induced by counter-regulatory hormones. Hyperglycemia brought on by insulin resistance increases the release of pro-inflammatory cytokines. The inflammatory response is then set off by cytokines, which further activates the sympathoadrenergic and hypothalamopituitary systems.

After resuscitation, the hypermetabolic flow phase that corresponds to SIRS replaces the ebb phase. In this phase, tissues that have been lost or injured are replaced, and body energy reserves are mobilized for recovery and repair. Its distinctive characteristics include vasodilation, increased capillary leakage, increased BMR, increased oxygen demand, and gluconeogenesis, which causes tissue edema. A week-long initial catabolic phase is followed by an anabolic phase that could last up to a week if a serious injury requires extensive healing and repair.

The increased production of anti-regulatory hormones like catecholamines, insulin, and glucagon as well as inflammatory cytokines like IL-1, IL-6, and TNF alpha

during the catabolic phase causes the mobilization of fat and protein, which causes significant weight loss and increases urine nitrogen excretion. Surgery patients usually have poor glycemic control because of the substantial insulin resistance present at this period as a result of the increased insulin production. Patients are in this stage of higher risk of problems due to the interaction between increasing catabolism and insulin resistance.. The neuroendocrine and inflammatory stress response will be exacerbated by these difficulties, which will result in a vicious catabolic cycle. [(2)]

POST OPERATIVE - ORGAN DYSFUCNTION & SURGICAL. STRESS

The degree of the surgical insult directly correlates with the stress response that is brought on by surgery. This stress response is a complex, well-planned procedure. Both an inflammatory and an endocrine metabolic response are included. Significant alterations including hypermetabolism and catabolism can arise from the endocrine-metabolic response. Malaise, myalgia, hyperthermia, and immunosuppression are symptoms of the inflammatory response, which also activates the humoral system. Perioperative morbidity is brought on by this surgical reaction, which is believed to be protective. It stresses the body and renders patients riskier throughout the perioperative phase, particularly those with comorbidities and pre-existing organ failure. [(3)]

Studies have shown that perioperative single therapies improve surgical morbidity. A multimodal perioperative rehabilitative care approach combines several interventions to improve surgical results and lessen the unwelcome consequences of surgery. These initiatives improve and speed up recovery, lower perioperative problems, and lower overall healthcare expenses. [(4)]

POST OPERATIVE STRESS REDUCTION

To manage perioperative physiological imbalance and lower morbidity, it is important to identify and treat perioperative risk factors for surgery. In the Pre-Op , Intra-Op , and postoperative phases, various risk factors have been discovered.

PREOPERATIVE RISK FACTORS-Concomitant illness, poor diet, smoking, and alcohol misuse are all risk factors.

INTRAOPERATIVE RISK FACTORS - Blood transfusion , Operative stress and loss of heat are examples.

POSTOPERATIVE RISK FACTORS - immunosuppression, nausea, pain , hypoxia, sleep issues, muscle loss , prolonged immobilization, and urine catheters. [4]

PATIENT FACTOR

Caesarean sections lead to postoperative patient discomfort like vomiting, nausea, pain, gastrointestinal issues such paralytic ileus, and impaired cardiopulmonary function . All these things may lengthen hospital stays and postoperative morbidity. ERAS seeks to maintain preoperative physiology while reducing postoperative complications.

Early feeding, improved pain management techniques, less incidence postoperative ileus and earlier mobilization are all advantages for enhancing pulmonary function and for early recovery. With better oxygen saturation as a result of better pulmonary function, there are important secondary effects such as a decrease in postoperative cardiac morbidity, cerebral dysfunction, and better wound healing.

Maintaining body composition is essential for lowering surgical morbidity. Lean body mass is lost as muscles atrophy even after brief periods of immobility. Lean body mass will be preserved, and work performance will be maintained by early oral feeding with protein beverages. For patients facing significant abdominal surgery, this is very crucial. [5]

After surgery, the body's response to exercise declines, but a multimodal perioperative care regimen can keep it from happening. Patients that receive multimodal therapy with early mobilization and early oral nutrition are discharged sooner, are more independent and have better physical performance.

Caesarean deliveries have become more common, rising 17.2% in 2015-16 to 21.5% in 2020-21. Process change has been started in response to the rising surgical activity, but the clinical care objectives were not met. [6]

Primary and repeat indication for caesarean section are cephalopelvic disproportion (37%), non-reassuring Fetal heart rate (25%) failure with forceps or vacuum delivery (3%) aberrant fetal presentation (20%) other (15%) repeating the indications. (No effort at VBAC: 82%), unsuccessful attempt at VBAC: 17%, and unsuccessful forceps- or vacuum-assisted delivery: 0.4%. [7]

Both scheduled and unscheduled surgery might have benefits and hazards connected with a caesarean delivery. The risks associated with emergency caesarean sections and the delay between the decision and the incision have been assessed. [13] From the time of decision until incision, which ranged between 0 and 30 minutes, the results for mothers and newborns were compared. The poorest maternal outcomes for decisions to incision

times less than 30 minutes compared to those durations over 30 minutes were endometritis, wound problems, and surgical damage. Negative fetal outcomes seen in 5 minutes APGAR 3, fetal death in labor, umbilical artery pH 7.0, hypoxic ischemic encephalopathy, and neonatal mortality with no deformities or anomalies, respectively, are all indicators of prematurity. Only the comparison of hypoxic ischemic encephalopathy to the group receiving deliveries within 30 minutes was significant..

The overall maternal morbidity (2.23 % of births by caesarean section; 0.9% by vaginal birth). for all comparisons, was not significant [(10)]. According to other studies, there is a two-fold rise in caesarean deliveries that result in higher morbidity rates due to puerperal infections, hemorrhages, and thrombosis. [(11,12)]

The risk of wound and uterine hematoma (4-6%), placenta previa (1-2%), blood transfusions (1-4%), hysterectomy (0.5-4%), and placenta accrete (0.25-2%) increases after the second repeat caesarean birth, according to studies comparing a number of repeat caesarean deliveries[(8)] . There have been proposed programs to lower the prevalence of caesarean deliveries and improve maternal safety. [(9)]

Clinical care protocols for preoperative, intraoperative, and postoperative care that are focused on the ERAS CD pathway and are evidence-based. The ERAS focused CD pathway offers the chance to measure, compare services/providers, and enhance each component or process as necessary.

Enhancing safety, efficacy, and efficiency across a range of healthcare processes is the goal of quality improvement. With improved pre-operative planning (informed consent/ patient education). As a result of improved surgical technique, activity measures of the services provided (Surgical Safety Checklist/ERAS/National Surgical Quality

Improvement Program), identification and elimination of unjustified system- and human-based variance, team-building activities (simulation), and the introduction of new training methods, surgical obstetric healthcare has evolved into a more delegated "team sport."

Depending on the patient's prior obstetric risk, there are both typical and difficult courses for the maternal clinical care procedure. However, there are an increasing variety of risk management techniques for the mother and fetus that address obstetric, medicinal, genetic, surgical, and lifestyle issues. To enhance the results, quality, and safety of maternal and fetal health, more prospective and quality assessment/improvement research, evaluation, and collaboration will be needed.

The Enhanced Recovery After Surgery (ERAS) guideline for caesarean delivery care will provide best practices, evidence-based guidelines for the Preoperative, Intraoperative, and Postoperative Phases with a primary maternal focus..

This ERAS Caesarean Delivery Guidelines are focused on procedures for both unscheduled and scheduled caesarean sections , considering everything from the choice to operate (beginning 30 to 60minutes Prior skin incision) until discharge from hospital.

There are only a few areas covered for pregnancy counselling and education, optimal care and needs of the newborn. Preoperative measures include antenatal counselling and education, histamine, and antacid use, H2 receptor antagonists, a two-hour fast and small meal before surgery, antimicrobial prophylaxis, skin preparation with chlorhexidine, and alcohol. Intraoperative measures include regional anesthesia and

maternal hypothermia prevention (forced warm air, warmed intravenous fluids, and room temperature), and postoperative measures include wound care and perioperative include (to achieve euvolemia -fluid management) [14-18].

ERAS-INTERVENTIONS

In order to reduce surgical stress and postoperative catabolism, the ERAS protocol include evidence-based coordinated care elements . [19,20,21]

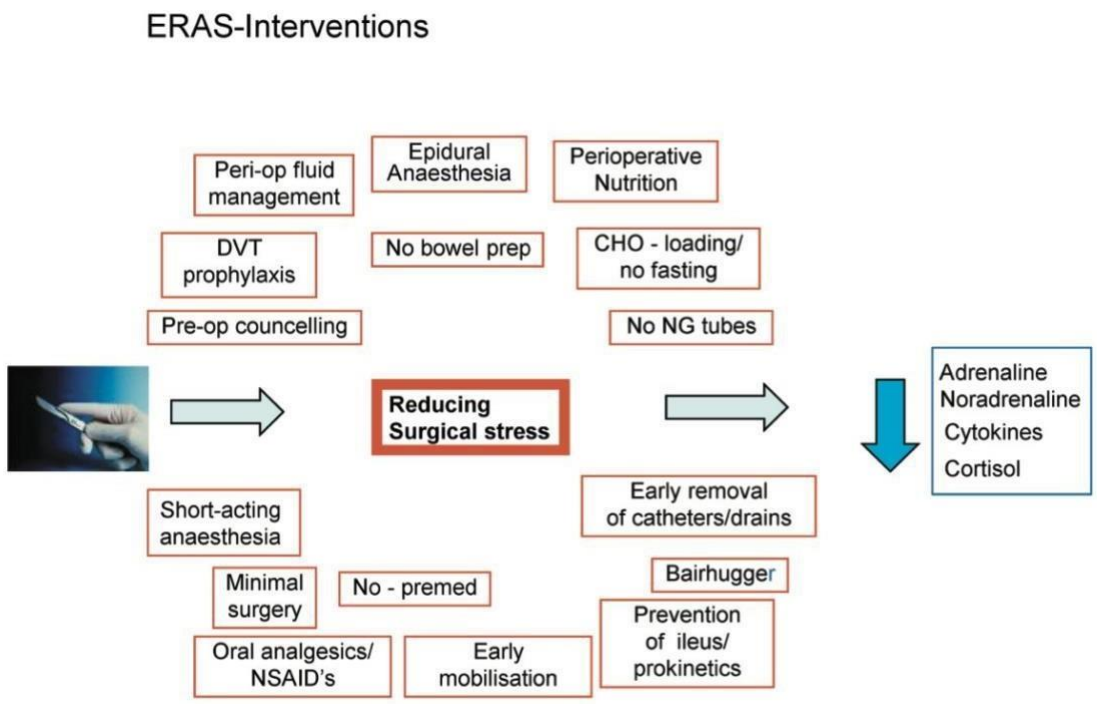


FIG NO 6: ERAS INTERVENTIONS

<u>Antenatal preadmission information, education, and counselling</u>

Pregnant women and their partners should receive appropriate antenatal care that includes preparing them for delivery, which may be either a vaginal or surgical delivery.

The timing of the procedure, the type of procedure and a comment on the patient's understanding or acceptance of the information should all be included in the documentation of a counselling process and preadmission information. Additionally, it's necessary to educate all women about the possibility of needing a caesarean delivery as well as the risks, advantages, and alternatives of the surgery because unplanned or urgent deliveries can happen with very little notice.

In the event of a caesarean delivery, details regarding the process leading up to, during, and following the procedure should be disclosed. Depending on whether a caesarean delivery is medically necessary or whether the mother requests the procedure, the Information and advice are subject to change. Depending on the circumstances, such as whether the caesarean delivery was unexpected, a repeat (indicated/rejected vaginal birth after caesarean delivery (VBAC) or not a VBAC candidate/not suggested), or a primary caesarean delivery, the counselling should be done in accordance with the indication.

The attending surgeon, an appropriate level obstetrics trainee, and an anesthesiologist are all required to participate in the informed consent procedure for an unplanned caesarean delivery, and they must provide the patient or partner with clear and significant information. In this unexpected situation, it is essential to provide a brief explanation of the caesarean birth indication, the recommended anaesthetic type, the surgical relevant information regarding procedure and its urgence.

The expectant mother and her partner should have the choice to consult with a neonatologist or pediatrician and visit the neonatal unit to determine whether the newborn infant need neonatal care before having a caesarean section performed.

Without a thorough assessment of the risks and advantages for both the woman and her child prior to admission, a caesarean section should not be contemplated in the absence of a medical indication.[22-25] Contrast the advantages and risks of vaginal delivery with knowledge of the elevated surgical risk, immediate consequences (such as abdominal organ damage, postoperative infection, thrombosis, and discomfort), and documented long-term repercussions (26-29). (Danger of uterine rupture and difficulties with the placenta in upcoming pregnancies).[30-32]

It is important to talk about the infant's immediate outcomes [32-35] as well as the risk of longer-term outcomes throughout childhood. [36-41] It's crucial to educate the expectant mother about the relative and absolute hazards connected to scheduled caesarean birth for a variety of chronic diseases during childhood and in young adulthood. [42-44]

Preoperative anaesthetic medications

Even in prosperous nations with ample resources, aspiration pneumonitis is still a rare but significant risk factor for maternal death under anesthesia for a caesarean delivery. [45-46] It was shown that using antacids before surgery—such as nonparticulate sodium citrate, which neutralizes stomach acid—and histamine H2 receptor antagonists—such as ranitidine—was preferable to doing nothing. Ranitidine works by preventing the secretion of stomach acid, which reduces both volume and acidity. Even though these results applied to women who were under general anesthesia, they nevertheless have some significance for caesarean deliveries performed using regional anaesthetic because some of the women could need to be converted.

In certain studies, but not all, gabapentin preoperative treatment was observed to improve post cesarean delivery pain management. [47,48] However, a systematic assessment of the

use of gabapentin during surgery to manage postoperative pain for a variety of surgical procedures found minimal benefit and an increased risk of significant side effects. [49]

The unscheduled caesarean birth surgery produced higher levels of post-cesarean delivery maternal drowsiness, according to one study [50] that examined this topic. To treat side effects and unexpected discomfort, sedative drugs (fentanyl, midazolam, meperidine, and ketamine) were administered more frequently in the unplanned caesarean birth group. It should only be used rarely because it has been suggested that maternal sedation may prevent mother-newborn skin-to-skin contact. [51]

There isn't much information available in publications about sedative premedication before caesarean deliveries. Lower Apgar scores [52] altered newborn thermogenesis, [46] and "floppy baby syndrome"[51,52] have all been linked to the use of benzodiazepines during pregnancy. Psychomotor performance deteriorated up to three hours following adult outpatient surgery, according to a study using sedative premedication. [53]

Therefore, preoperative sedation should be avoided due to the possibility of adverse consequences on the mother and the newborn.

The focused enhanced recovery after surgery (ERAS) -Patient check list

The patient should have a clear understanding of the following factors:

1. The justification or indication for a c-section delivery
2. Where and how an abdominal incision is made

3. The attending surgeon's method for closing abdominal skin incisions (randomized controlled trial evidence supports subcuticular skin closure for patient satisfaction and cosmetic outcome)

4. The precautions taken to reduce postoperative maternal infectious morbidity (wound, uterus, pelvis, and bladder); the estimated infection rate is 3- 15%

5. The estimated postoperative risk assessment for thromboembolism for the patient and whether additional medical prophylaxis is required beyond the conventional mechanical techniques (elastic stockings or sequential compression devices); estimated prevalence is 0.5-2.2 per 1000 pregnancies or prevalence of venous thromboembolism ranges from 1-2 per 1000, with risk of pulmonary embolism 40-60% after delivery.

6.The pre and post operative oral intake schedules

7.Mother and baby's anticipated postoperative activities and locations.

ERAS elements for cesarean delivery:

Preoperative

1. Anesthesia-related drugs

2. Fasting

3. Supplemental carbohydrate intake

4. Antimicrobial prevention

5. Skin washing and vaginal prep to reduce infectious risk

6. Techniques to avoid intraoperative hypothermia

Intraoperative

1. Preoperative and postoperative anaesthetic control

2. Antimicrobial vaginal and abdominal cleaning

3. Cesarean delivery procedures involving surgery (opening-delivery-closure)

4. Postoperative fluid administration

5. Delayed cord clamping and immediate care for newborns

Postoperative

1. ERAS chewing gum/sham feeding

2. Control of nausea and vomiting

3. Analgesia

4. Early feeding and postoperative nutritional treatment

5. Glucose management

6. Thromboembolism avoidance

7. Prompt mobilization

8. Management of urinary drainage

9. Discharge of new mothers and babies

PREOPERATIVE ELEMENTS

Preoperative fasting

Fasting preoperatively was initially proposed to stop vomiting's during anesthesia. It became more customary to advise increasing fasting times from 6 hours to the normal "NPO after midnight"[54]. Shorter preoperative fasting intervals [55] did not result in an increase in problems or a volumetric or pH-related change in gastric contents. According to the European Society of Anesthesiology Guidelines suggests clear fluids orally 2hrs prior to elective surgery for adults and children [56] and solid food should be avoided for six hours.

Preoperative carbohydrate supplementation

Oral carbohydrate supplements used up to two hours before surgery have undergone numerous trials. According to majority of trials, they had a significant risk of bias, and therapy was linked to just a minor (0.3day) reduction in duration of stay and a faster time for flatus to pass (0.39 days). Overall, postoperative consequences remained the same, and no cases of aspiration pneumonia were documented. [57]

A shorter fasting period followed by a carbohydrate consumption may enhance patient results. Drinks containing carbohydrates (100 gms the previous night of surgery and 50 gms two hours prior; IV glucose 5 mg/k/min) help to conserve postoperative insulin. [58] More evidence is needed to prove benefit. [59,60]

Preoperative carbohydrate loading for diabetic pregnant women is controversial and not widely accepted. Preoperative carbohydrate loading was shown to be noninferior to fasting, and no group demonstrated superiority for preoperative blood glucose concentration, hyperglycemia, or duration of stay. (61)

In order to improve labor outcomes, supplementing or feeding with carbohydrates has been studied in a number of clinical trials. The procedure seems secure even though it is unsuccessful. (62) For pregnant women with diabetes, oral carbohydrate supplementation studies are not available prior to caesarean delivery.

Non-diabetic pregnant women may get oral carbohydrate fluid supplementation two hours before having a Caesarean section delivered.

INTRAOPERATIVE ELEMENTS

Skin preparation and Preoperative Antibiotic prophylaxis

A clean (class I) incision during a caesarean delivery is one that is made before to the rupture of the membranes and is devoid of chorioamnionitis. A caesarean birth, however, is typically characterized as a clean contiguous (class II) incision when it is performed in the event of ruptured membranes, particularly during the active phase or second stage of labor or in the presence of chorioamnionitis. Some of these subsequent incisions may be considered class III contaminated wounds.

However, preventive antibiotics and other therapies have been found to be beneficial for all and they all have a higher chance of developing an infection after surgery. Class II or class III incisions may also expose patients to vaginal flora, although class I wounds will

mostly be at risk from abdominal skin flora. When thinking about preventive antibiotics, wound care, and vaginal care, these microbial threats should be your main concern.

The standard of care has been the use of a relatively narrow-spectrum first generation cephalosporin targeted against skin flora for infection prophylaxis for caesarean births performed prior to rupture of the membranes, despite the fact that similar benefits have been observed with various antibiotic regimens. [63] These antibiotics were frequently administered in the past during cord clamping due to worries about exposure to the fetus. However, it is currently advised to administer the antibiotics 30 to 60 minutes prior to the caesarean birth if it is safe to do so since it has been demonstrated in several trials to lower the risk of subsequent wound infections. [64,65]

The most current study found that women who took preoperative preventive antibiotics experienced a significant reduction in composite maternal infection morbidity when compared to those who received prophylactic antibiotics at the time of cord clamping. Expanding the selection of pre-incision antibiotics may help reduce the frequency of wound infections, according to mounting data.. [66]

Azithromycin was added to the standard cephalosporins in a recent, multicenter experiment to further minimize infectious complications and wound infections. In addition, trials of the use of curtains infused with antibiotics without sufficient evidence have been conducted.

Obese women are more at risk for wound complications and could potentially have more blood available for the administration of antibiotics. It has been reported in several recent investigations that the typical 1- or 2-g dose of first-generation cephalosporins may not provide sufficient tissue concentrations. [67,68]

However, there were no changes in infectious morbidity between cephazolin dosages of 2-g and 3-g in two recent studies . [69,70] Therefore, more data must be gathered before regularly advising greater preventive antibiotic dose in obese women.

Postsurgical prophylaxis is another modern approach for antibiotic prophylaxis in obese women. A new prospective, randomized trial discovered that taking cephalosporin and metronidazole after a caesarean delivery decreased the incidence of surgical site infection in contrast to using a placebo. [71]

"Wound preparation"

Before being admitted to the hospital for a scheduled caesarean delivery, women should, if at all possible, take an antibacterial shower. The Centers for Disease Control advise against using a povidone-iodine solution to clean the abdomen before surgery and instead suggest using a chlorhexidine-alcohol scrub. In one significant trial, the chlorhexidine-alcohol scrub was associated with a decreased incidence of wound infections. [73] But a more recent, big, randomized trial found no difference. [74] As a result, even though chlorhexidine-alcohol is typically advised, the recommendation is based on a larger body of information from other procedures as well as studies on caesarean deliveries. [75]

Vaginal preparation

A growing body of research suggests that pre-C-section antimicrobial vaginal treatment with a povidone-iodine solution minimizes the incidence of infection problems in women who are in labor or have ruptured membranes.

In the most current review, the risk of endometritis dropped from 8.3 to 4.3%. This was observed in investigations in both women who were in labor and those who had ruptured membranes.

Pre- and intraoperative anaesthetic management

Regional anaesthetic has been shown to improve outcomes such adverse events, the duration of days spent in the hospital, nausea , vomiting, organ function, mobility, and postoperative recovery. (76)

The greater use of regional obstetric anaesthetic techniques is thought to be one of the factors resulting in a drop in the incidence of maternal mortality related to anesthesia because they are seen to be safer than general anesthesia. (77) However, a meta-analysis of mode of anesthesia for caesarean birth(78) found no evidence that regional anesthesia was preferable to general anesthesia in terms of significant mother or newborn outcomes, other from a larger maternal blood loss with general anesthesia. This might be because most studies lack adequate power due to the rarity of mortality and major illness. Additionally, regional anesthesia is preferable to general anesthesia since it has a lower risk of postoperative drowsiness. (79,80,81)

The outcomes are comparable between spinal and epidural anesthesia; however, spinal anesthesia has a shorter onset time for a good block and a lower incidence of intraoperative pain. (82) Combination even if the presence of an epidural catheter gives the option to lengthen or prolong an insufficient spinal block, spinal epidural anesthesia may allow for a quicker motor recovery than spinal anesthesia. (83)

The administration of morphine (intrathecal) improves postoperative analgesia, even if the risk of side effects (pruritus, nausea, and vomiting) increases with dosage supplied and the ideal amount is uncertain. [84,85] Fentanyl and sufentanil, two intrathecally administered opioids with shorter half-lives, improve intraoperative analgesia but not postoperative analgesia. [84] The transversus abdominis plane field block offers more analgesia than a placebo in the absence of intrathecal morphine and can lower the initial 24-hour mother morphine consumption. [86] Abdominal nerve blocks and local analgesic infiltration were found to improve postoperative analgesia following caesarean delivery in a study. [87]

Regional anesthesia is the preferred kind of anaesthetic for caesarean deliveries as part of an Enhanced recovery plan.

Neonatal pathway: New born infant immediate care

Compared to many major life events the stress in giving birth outweighs all others, and the enormous physiologic changes that must take place. A successful life from fetal to neonatal depends on the newborn baby's initial care.

Fitness for service refers to the ability (skills, staffing and equipment) and readiness for on-spot resuscitation of neonate in all locations that perform caesarean deliveries. [88] At 1, 5, and 10minutes following delivery, a baby should be evaluated for health and performance using the Apgar scale. Interventions for active infant in the OR include the best time to clip the umbilical cord, safeguarding against hypothermia, assisting with breathing onset, and establishing skin-to-skin contact between the mother and the newborn.

Following a term birth, delaying the clamping of the umbilical cord for at least one minute lowers newborn anemia and improves neurodevelopmental outcomes. [89-92] The baby may be placed on the mother's abdomen or legs during a caesarean delivery, or the doctor or a helper may hold the child close to the placenta until the umbilical cord is clamped. [93] In systematic reviews, it has been shown that postponing cord clamping by at least 30 seconds in preterm infants reduces the incidence of necrotizing enterocolitis, intraventricular hemorrhage, and the requirement for blood transfusions. [94-98]

Care providers should make sure they are prepared to identify and treat newborn jaundice because delayed cord clamping is linked to a higher risk for hyperbilirubinemia. [89-92] limiting immediate cord clamping to only those children who require resuscitation immediately or whose placental circulation is unhealthy.

Across gestational ages, hypothermia is linked to an increase in newborn morbidity and mortality. Maternal and newborn normothermia may be maintained by operating room temperature standards. [99] While waiting for the cord to be clamped, the baby's head should be immediately dried and covered to prevent heat loss. Preterm infants are kept warmer with exothermic heaters or open bed incubators, trans warmer bedding, plastic wraps/bags, and caps that raise entry temperatures to neonatal facilities and reduce hypothermia [100-103] .After birth, the body's temperature needs to be monitored and kept between 36.5 C and 37.5 C. [88]

Along with preventing hypothermia, it's advised to help the baby restore bodily control and gently stimulate them for their first cry or breath. Within 10 to 30 seconds of birth, about 85% of term newborns begin breathing on their own; The remaining 5% require assistance ventilation, while another 10% respond during drying and stimulation. [88]

Refrain from routinely suctioning the airway or aspirating the stomach.; only clear secretions if they appear to be blocking the airway. If meconium is discovered in the amniotic fluid, a similar course of action is advised. [88,104,105] Regularly adding oxygen to the inspired air for newborns (outside of resuscitation) may be harmful and is not advised. [106]

In a planned caesarean delivery setting, the neonatal morbidity in 2 groups of women—those who did not experience labor and those who did—was compared. A stratified analysis of data from full-term and early term (37–38 weeks) (39-40 weeks). Similar neonatal hospitalization and respiratory distress risks were established for the 2 groups, but neonatal septicemia or the need for early-term antibiotics was shown to be 2- to 3-fold more likely. Early-onset labor considerably increased endometritis and antibiotic use, but it also dramatically reduced maternal blood loss after caesarean birth by more than 500 mL. According to the study, starting labor before a planned caesarean delivery may raise the risk of a neonatal infection but was not associated with a decrease in infant respiratory morbidity.

The most common reason for hospital admission is childbirth, and caesarean sections are the most common operations. Given the high volume of obstetric surgical activity, applying the ERAS technique to this surgical care context would seem sensible in order to use evidence-based practices to enhance patient outcomes. Due to the fact that such therapy always involves two patients, the effect may even be stronger (mother and fetus).

Enhanced Recovery After Surgery for cesarean delivery preoperative modifiable clinical factors

Nonmodifiable clinical factors	Modifiable clinical factors
Paternal age	
History (obstetrics/medical/surgery/body mass index)	Optimization of selected comorbidities (hypertension/diabetes mellitus/anemia/smoking; small for gestational age/large for gestational age/stillbirth/preterm birth at <34 weeks gestation)
Family history (genetics/birth defects/ multifactorial disease)	Surgical pathway (preoperative, intraoperative, postoperative)
Gestational weeks 0–20 (chromosomes/birth defects/miscarriage)	

FIG NO 7:ERAS MODIFABLE CLINICAL FACTORS

As doctors implement these strategies, it becomes increasingly important to regularly evaluate outcomes and apply quality improvement techniques to best practices. To improve the results, quality, and safety of maternal and fetal health, more prospective and quality assessment/improvement research, evaluation, and collaboration will be needed.

POSTOPERATIVE ELEMENTS

Nausea and vomiting prevention

When having a caesarean delivery, nausea and vomiting are frequent side effects. If the patient is conscious during the process, these can also occur in the recovery area afterward. [16] During a regional anaesthetic for a caesarean delivery, there is a variable rate of nausea and vomiting. The length of the procedure and the danger of bleeding and surgical harm are both increased by maternal symptoms. Vomiting and nausea are risk factors for aspiration, a documented cause of maternal death. [107] Vomiting and nausea decreased patient satisfaction and caused them to wait longer to leave the hospital.

During caesarean birth, nausea and vomiting can have a variety of causes. A frequent cause of maternal hypotension is regional anesthetic. Currently, a variety of methods are employed to reduce or avoid hypotension and to perhaps reduce the occurrence of nausea and vomiting. [108]

Antiemetic medications have been successfully utilized as a preventative measure during caesarean deliveries performed under regional anesthesia to stop nausea and vomiting. [109] Prevention of nausea and vomiting using a multimodal strategy is increasingly becoming the norm. A Cochrane review study found that sedatives like midazolam and propofol, 5-HT3 antagonists like ondansetron, and dopamine antagonists like metoclopramide were beneficial in reducing intraoperative nausea and vomiting. [108] Only intraoperative nausea and vomiting were reported to be reduced by corticosteroids (like dexamethasone). [106] Postoperative nausea and vomiting were effectively reduced by anticholinergic medications, such as scopolamine. [108] Opioids, extra oxygen, extra intravenous fluid, acupressure/acupuncture, and other therapies did not lessen intra-operative nausea or postoperative nausea and vomiting. [106]

Postoperative analgesia

Any type of surgery recovery may be negatively impacted by inadequate postoperative pain management. Pain can hinder rehabilitation efforts and delay discharge while also lengthening the healing process. [110] The mother's attempts to be independent and care for her baby during a caesarean delivery may be delayed by higher pain scores. as part of ERAS, to alleviate post-operative pain [111] with lesser side effects and a quicker post-operative recovery, multimodal analgesics are a crucial component.

Several intra-operative procedures may improve post cesarean delivery analgesia. After a caesarean delivery, long-acting intrathecal opioids like morphine can reduce pain for several hours, but they come with a host of negative side effects like pruritus, vomiting, and nauseas. [112,113] In case the intrathecal long-acting opioids are not available, the plane field block in transversus abdominis gives excellent pain control post operatively. [114] Abdominal nerve blocks and local analgesic infiltration were seen to improve analgesia postoperatively after caesarean delivery in a Cochrane study. [115]

A oral analgesics review for post LSCS delivery pain treatment, there is not enough data to prescribe the most secure and efficient dosage. Nonsteroidal anti-inflammatory medications (NSAIDs) are recognized to reduce postoperative discomfort following caesarean delivery when administered intraoperatively. [116]

The evidence for paracetamol in the obstetric population is less clear, however a systematic evaluation of trials that included studies in which patients had LSCS found that the combination of paracetamol and NSAIDs was synergistic for postoperative pain [117] .This combination saves opioid, resulting in less side effects associated with opiates, and is inexpensive, effective, simple to use. It is also appropriate for use with ERAS regimens [111]

Perioperative nutritional care

Numerous studies from locations with diverse cultural listings older than 15 years have focused on early feeding. Early feeds are defined as the first feedings that occur between 30 minutes [118] and 8 hours after a caesarean delivery. Patients were randomly randomized to receive early feeding within 2 hours or conventional feeding within 18 hours in the largest study of early feeding [119]. In addition to improved ambulation,

length of stay, and mother satisfaction, the results demonstrated a decrease in hunger and thirst with no effect on readmissions, gastrointestinal issues, or infections[120]. Results from this trial and similar or better-satisfaction trials have showed consistent results, a rapid return to solid meals, and a quicker recovery of[119] Early dietary resumption was associated with increased nausea, according to studies, but this was self-limited.[118] The details of postoperative diets differ. To assist breastfeeding, the post-surgical diet should include extra portions of fruit, milk, calories as well as vegetables. That diet ought to include enough fiber to keep you from getting constipated.

Early mobilization after caesarean delivery

Following surgery a few short-term outcomes, such as a bowel function quick recovery, mild risk of thrombosis , and a shorter hospital stay, can theoretically be improved by early mobilization. There is no information available to determine whether early mobilization enhances outcomes following caesarean delivery. [121]

A surgical bundle's "quick track" or "improved recuperation after surgery" sometimes includes early mobilization (i.e., ERAS). These packages consist of in-depth preoperative counselling, enhanced pain management together with prompt postoperative diet resumption, and early mobilization. Patients who have undergone caesarean deliveries have not been tested for this package of services. Additionally, this surgery has not been the subject of any randomized controlled trials in patients with gynecologic problems.. The ERAS procedure lowered complications, but not because there were fewer serious complications. The review concluded that ERAS should not be widely utilized merely based on this information since the quality and quantity of data of this group are inadequate. It is important to highlight that these trials were conducted

on patients who were significantly different from obstetrics patients, in addition to the fact that the effects of the individual components in the bundle cannot be analytically distinguished. [121]

Urinary drainage after caesarean delivery

A prospective study involving 270 women who had C-section births was undertaken in 2003 by Ghoreishi[122]. The results showed that insertion of a urinary catheter did not improve surgical exposure of the lower uterine region or minimize urinary tract injury during caesarean delivery. Patients without indwelling urinary catheters had mean ambulation times and average hospital stays that were shorter. Senanayake[123] found that patients without an indwelling urinary catheter had a low incidence of postoperative urine retention following caesarean delivery in a 344 patient non-randomized clinical trial.

Patients in a study who underwent elective caesarean delivery were randomly assigned to a group that did not get catheterization or one that did (the catheter was removed 12 hours postoperatively). The study reported that the no catheterized group had significantly shorter mean times to patient ambulation, first postoperative voiding, oral rehydration, bowel movement, and length of hospital stay. The prevalence of urinary tract infection was noticeably increased even when the urine catheter was withdrawn 12 hours after surgery. The use of a urinary catheter is associated with an increased risk of urinary tract infections, according to a comprehensive analysis that comprised two randomized controlled trials and one nonrandomized controlled study. [125] The

difficulties of intraoperative surgery or postoperative urinary retention are not lessened by urine catheters. [124]

In a study, women having an elective caesarean delivery were given the option of having their urinary catheters removed after 12 hours or right away. The rate of bacteriuria, dysuria, burning micturition, pee frequency and urgency, time until first voiding, mean postoperative ambulation time, and length of hospital stay were all considerably reduced in the immediate urinary catheter removal group.

The practice of inserting a urinary catheter during a caesarean delivery is commonly acknowledged. Bladder drainage is typically thought to be able to monitor urine flow, lessen damage to the urinary system, and lessen postoperative urinary retention. However, one of the most typical post-Cesarean consequences is urinary tract infection. Urinary tract infections, urethral discomfort, and challenging voiding can all be made more common by indwelling urinary catheters. These complications lead to postponed discharge from the hospital, an extended stay, and higher costs. [125]

According to a study patients who underwent caesarean delivery, , the use of urinary catheters in was linked to longer hospital stays, longer times between voiding episodes, and higher rates of discomfort from catheterization.

Postpartum /Postoperative Mother Pathway:

Discharge counselling

Research on the best discharge counselling for women who have had caesarean deliveries is scarce. Nevertheless, following caesarean delivery, surveilling the complications after discharge suggests that SSI seen in >80% of the patients in the 10% of the cases was after the discharge, [126] which indicates Women should receive comprehensive information on the typical course of discharge, infection symptoms, activity limits, and directions on when to seek medical assistance.

The effects of studies on discharge planning across a range of patient groups and medical specialties suggest that overall discharge plans may lead to a slight reduction in length of stay, a reduction in the risk of readmission for a small number of patient groups, and better satisfaction for both medical staff and patient. According to a before-and-after study, providing standard written information increased compliance with discharge instructions in the emergency department from 26.2% to 36.2% when it included details on the diagnosis, course of treatment, dosage, and potential side effects of medications, as well as the suggested time and location of follow-up at an outpatient clinic. [127]

Obstetric comorbidities lifestyle, medical, surgical, and genetic variables have an increasing impact on risk management in the complicated pathways of maternal clinical care. The outcomes, quality, and safety of maternal and fetal health will need to be improved, and this will need more quality assessment, prospective and improvements in research. .

MATERIALS AND METHODS

- Patients admitted in Department of OBSTERTICS & GYNAECOLOGY in B.L.D.E. (DEEMED TO BE UNIVERSITY) Shri B.M. Patil Medical College Hospital and Research Centre, Vijayapura fulfilling the inclusion and exclusion criteria.

- The patients will be informed about study in all respects and informed written consent will be obtained.

STUDY PERIOD: 1 YEAR (JANUARY 2021 TO APRIL 2022)

METHOD OF COLLECTION OF DATA

INCLUSION CRITERIA

All Term-Elective LSCS, Singleton pregnancies and Age 18-35 years.

EXCLUSION CRITERIA

1. Age less than 18 years and more than 35 years
2. Chronic or complicated maternal condition such as (diabetes, hypertension, heart disorders, thyroid diseases etc.,)
3. Multifetal gestations.
4. Foetal and maternal active infections
5. Post operative histories of previous pregnancies including Postpartum haemorrhage history uterine rupture, ectopic pregnancy or any myomectomy and complex pregnancies including placenta accreta.
6. Emergency LSCS.
7. Preterm LSCS.

Sample size calculation:

- With Anticipated Proportion of First Ambulation (First postoperative day) among ERAS 64 % and No ERAS 38% [7] resp, the study would require a 80 samples per group, or 160 samples overall (assuming equal group sizes), are needed to detect a difference in proportions between two groups with a 90% power at a two-sided p-value of 0.05.
- Formula used

$$n = \frac{(z_{\alpha} + z_{\beta})^2 2\, p^* q}{MD^2}$$

Where Z= Z statistic at a level of significance

M.D. = Anticipated difference between two proportions

P=Common Proportion

q = 100-p

METHODOLOGY

• Using the proper statistical software for the social sciences, statistical analysis of the collected data will be carried out in a Microsoft Excel sheet (Version 2.0).

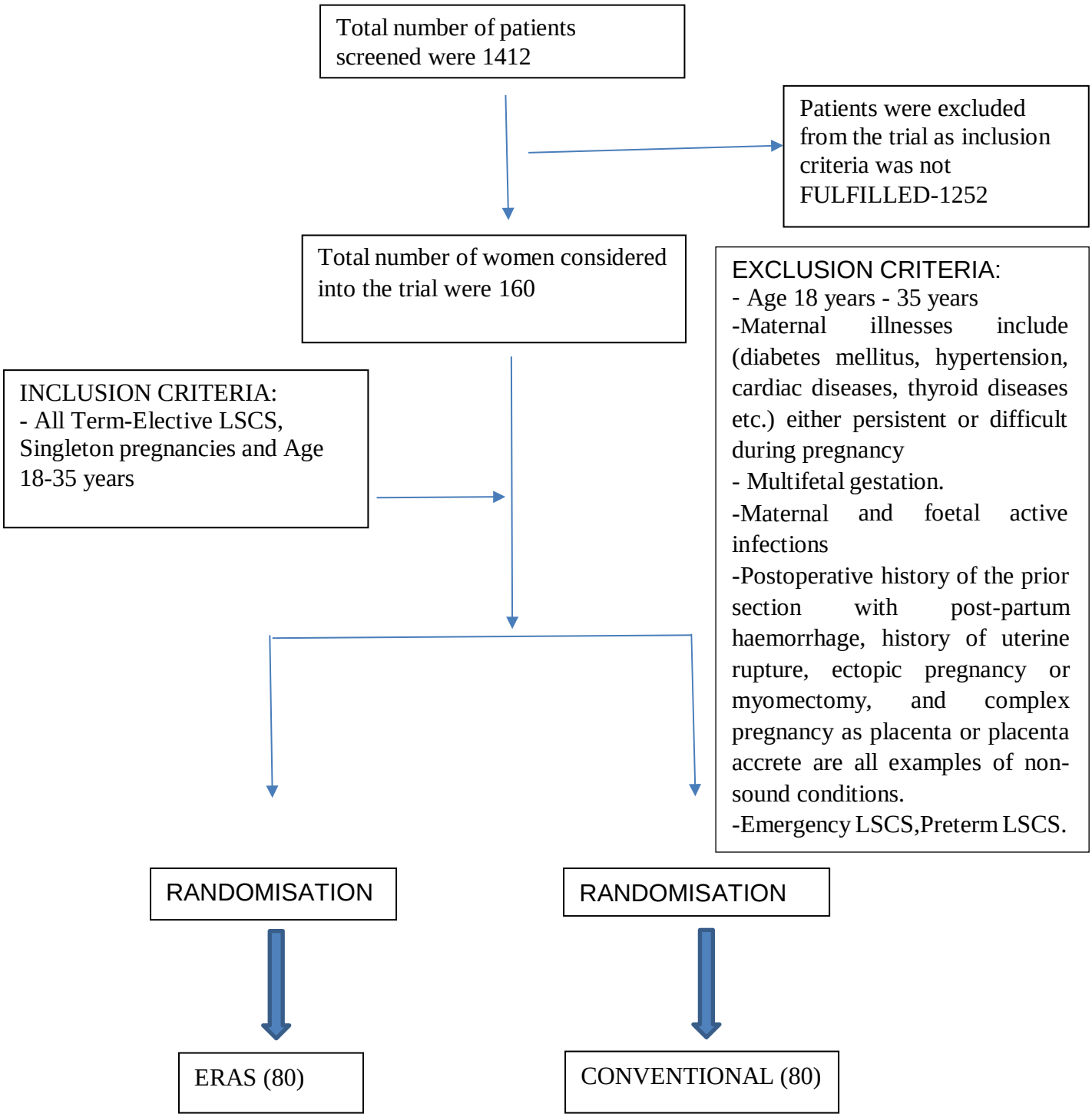
• Counts, percentages, graphs, and the Mean ± S.D. will all be used to display the results.

• Independent t-tests will be used to compare normally distributed continuous variables between two groups. For typically skewed distributed data, the Mann Whitney U test will be applied. The Chi-square test will be used to compare categorical variables in the two groups. Statistics will be considered significant at P 0.05. Two-tailed tests will be used for all statistical tests.

RESULTS

A total of 1412 women were screened out of which 1252 women were excluded from the trail as inclusion criteria was not fulfilled. A total of 160 women were considered into the trial. These 160 women were randomized into ERAS and Conventional group by computer generated randomized program.

RESULTS



SATISTICAL ANALYSIS

Data was entered in the excel spread sheet. **SPSS** version 20. was used to perform the statistical analysis. Descriptive statistics of the explanatory and outcome variables were calculated by mean, standard deviation for quantitative variables, frequency and proportions for qualitative variables. Chi square was applied to test the statistical association between qualitative variables. Unpaired t test was applied to test the mean difference of quantitative variables with respect to groups. The Level of significance was set at 5%.

OBSERVATON AND RESULTS

TABLE NO 1: Age distribution of ERAS and conventional protocol groups in the collected sample

Age group	ERAS	Conventional	Total
</= 20	3	2	5
	3.8%	2.5%	3.1%
21-25	38	36	74
	47.5%	45.0%	46.3%
26-30	24	31	55
	30.0%	38.8%	34.4%
31-35	12	6	18
	15.0%	7.5%	11.3%
> 35	3	5	8
	3.8%	6.3%	5.0%
Total	80	80	160
	100.0%	100.0%	100.0%
p value - 0.456			

This table shows the age distribution of the study subjects compared by Chi-Square test

Among 80 women of ERAS group ,3 women belonged to the age group of <20yrs which is 3.8%, 38 women belonged to 21-25yrs which is 47.5%, 24 women belonged to 26-30yrs which is 30.0% ,12 women belonged to 31-35yrs which is 15%, 3 women belonged to age group >35yrs which is 3.8%

Among 80 women of the conventional group, 2 women belonged to the age group of <20yrs which is 2.5%, 36 belonged to 21-25yrs which is 45.0%, 31 women belonged to 26-30yrs which is 38.8%,6 women belonged to 31-35yrs which is 7.5%, 5 women belonged to age group >35yrs which is 6.3%. The age distribution between both groups shows p value 0.456 which is more than 0.05, thus implying there is no statistical significance.

Graph no.1: Bar diagram showing the age distribution of the study subjects

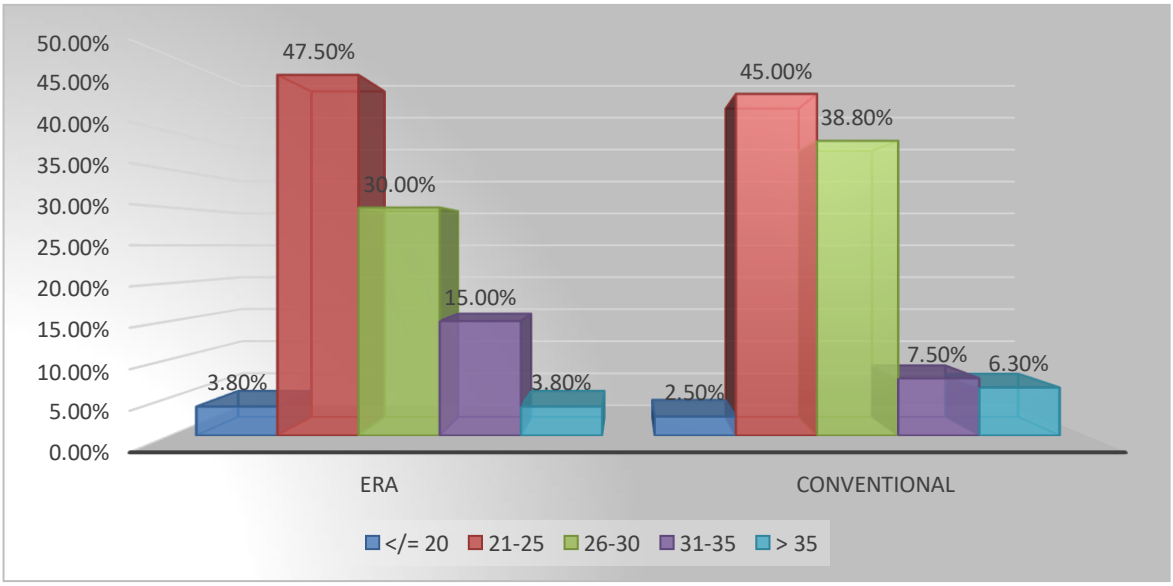


TABLE NO.2: Distribution of ERAS and Conventional protocol cases with respect to their gestational age

POG (WEEKS)	ERAS	Conventional	Total
37	28	23	51
	35.0%	28.75%	31.90%
38	33	25	58
	41.25%	31.25%	36.25%
39	16	21	37
	20.0%	26.25%	23.12%
40	3	11	14
	3.75%	13.75%	8.75%
Total	80	80	160
	100.0%	100.0%	100.0%
p value - 0.303			

This table shows distribution of gestational age between ERAS group and Conventional group and compared with Chi-Square test.

Among 80 women of ERAS group 35.0% belonged to 37weeks gestational age, 41.25% belonged to 38weeks, 20.0% were 39weeks, 3.75% were 40 weeks.

Among 80 women of conventional group 28.7% were 37weeks ,31.25% were 38 weeks ,26.25% were 39 weeks, 13.75% were 40 weeks. The comparison shows p value 0.303 which is more than 0.05, thus implying no statistical significance.

<u>Graph no .2:</u> Bar diagram showing the gestational age among the study subjects

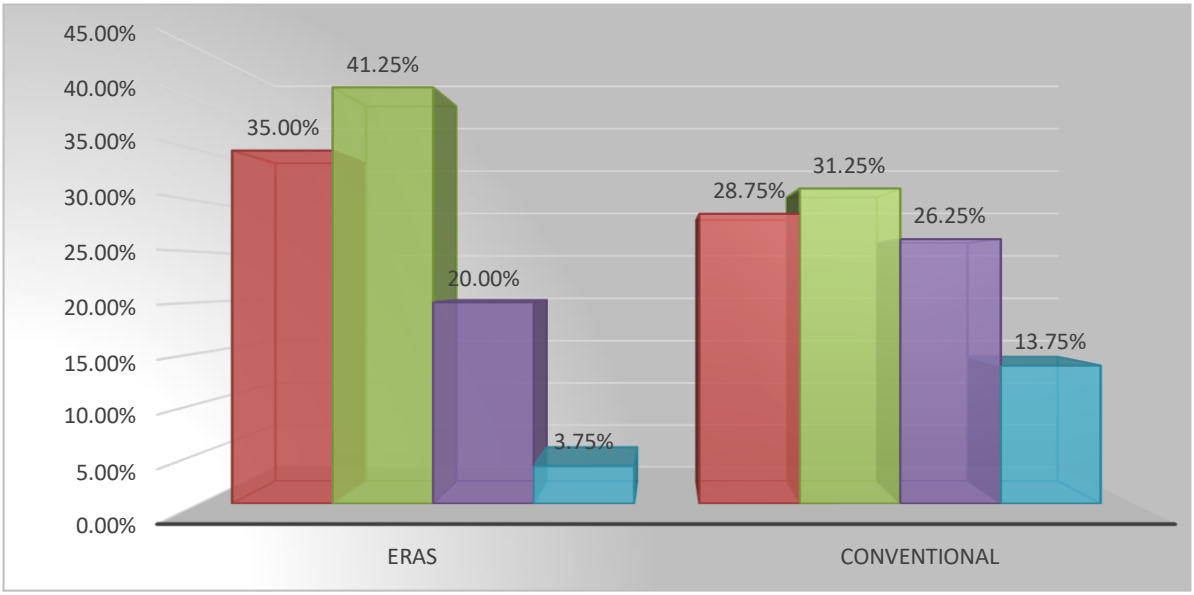


Table no.3: Distribution of NBM status of solids in both ERAS and conventional group

NBM STATUS-SOLIDS	ERAS	Conventional	Total
4	2	0	2
	2.5%	0.0%	1.3%
6	9	0	9
	11.3%	0.0%	5.6%
7	12	10	22
	15.0%	12.5%	13.8%
8	50	29	79
	62.5%	36.3%	49.4%
9	0	7	7
	0.0%	8.8%	4.4%
10	7	31	38
	8.8%	38.8%	23.8%
12	0	3	3
	0.0%	3.8%	1.9%
Total	80	80	160
	100.0%	100.0%	100.0%
p value - 0.001			

This table shows the distribution of NBM status for solids in the study subjects. It was observed that among 80 women of ERAS group 2 were 4hrs NBM which is 2.5%, 9 were 6hrs NBM which is 11.3%, 12 were 7hrs NBM which is 15.0%, 50 were 8hrs NBM which is 62.5%.

Among 80 women of conventional group 29 were 8hrs NBM which is 36.3%, 7 were 9hrs NBM which is 8.8%, 31 were 10hrs NBM which is 38.8%, 3 were 12hrs NBM which is 3.8%

The comparison of NBM for solids showed p value of 0.001 which is less than 0.05, thus showing a statistical significance.

Graph no .3: Bar diagram showing the distribution of NBM for solids between ERAS and conventional group .

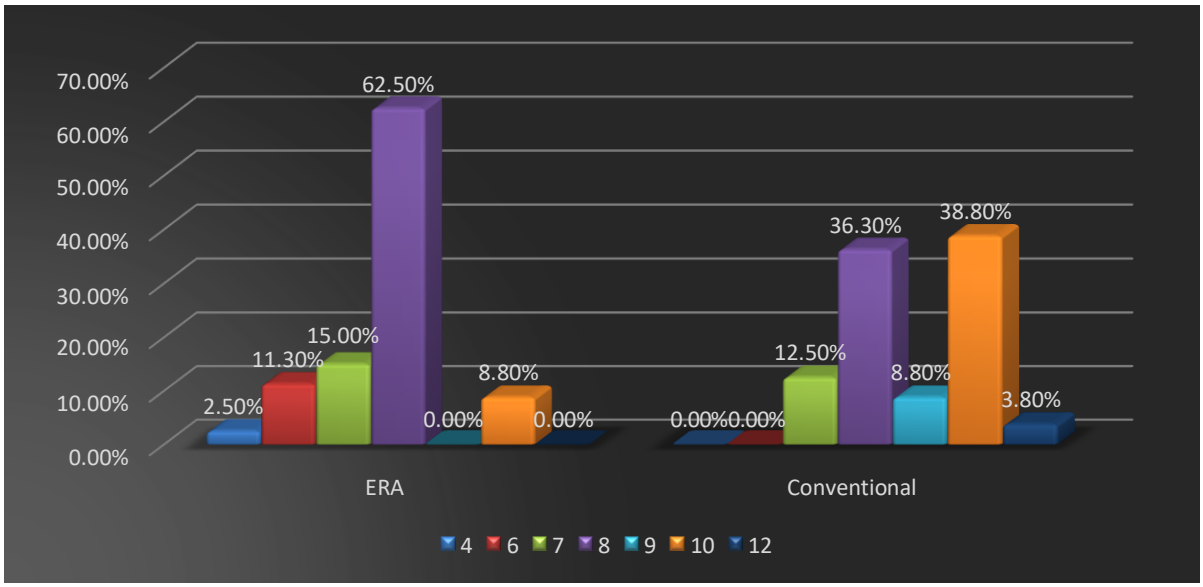


Table no.4: Distribution of NBM for liquids between ERAS group and conventional group

NBM STATUS -LIQUIDS	ERAS	Conventional	Total
2	72	5	77
	90.0%	6.3%	48.1%
3	4	10	14
	5.0%	12.5%	8.8%
4	2	22	24
	2.5%	27.5%	15.0%
5	2	13	15
	2.5%	16.3%	9.4%
6	0	25	25
	0.0%	31.3%	15.6%
7	0	4	4
	0.0%	5.0%	2.5%
8	0	1	1
	0.0%	1.3%	.6%
TOTAL	80	80	160
	100%	100%	100.0%
p value - 0.001			

This table shows the distribution of NBM for liquids between ERAS group and conventional group. Among the 80 women in ERAS group 72 were 2hrs NBM which is 90 %, 4 were 3hrs NBM which is 5%, 2 were 4hrs NBM which is 27.5%, 2 were 4hrs NBM which is 2.5%.

Among the 80 women of the conventional group 5 were 2hrs NBM which is 6.3%, 10 were 3hrs NBM which is 12.5% ,22 were 3hrs NBM which is 27.5 %, 13 were 5hrs NBM which is 16.3%, 25 were 6hrs NBM which is 31.3%, 4 were 7hrs NBM which is 5 %, 1 was 8hrs NBM which is 1.3%.

This comparison between NBM for liquids between ERAS and conventional group has showed p value of 0.001 which is less than 0.05, showing statistical significance.

<u>Graph no .4:</u> Bar diagram showing comparison of NBM for liquids between ERAS group and conventional group

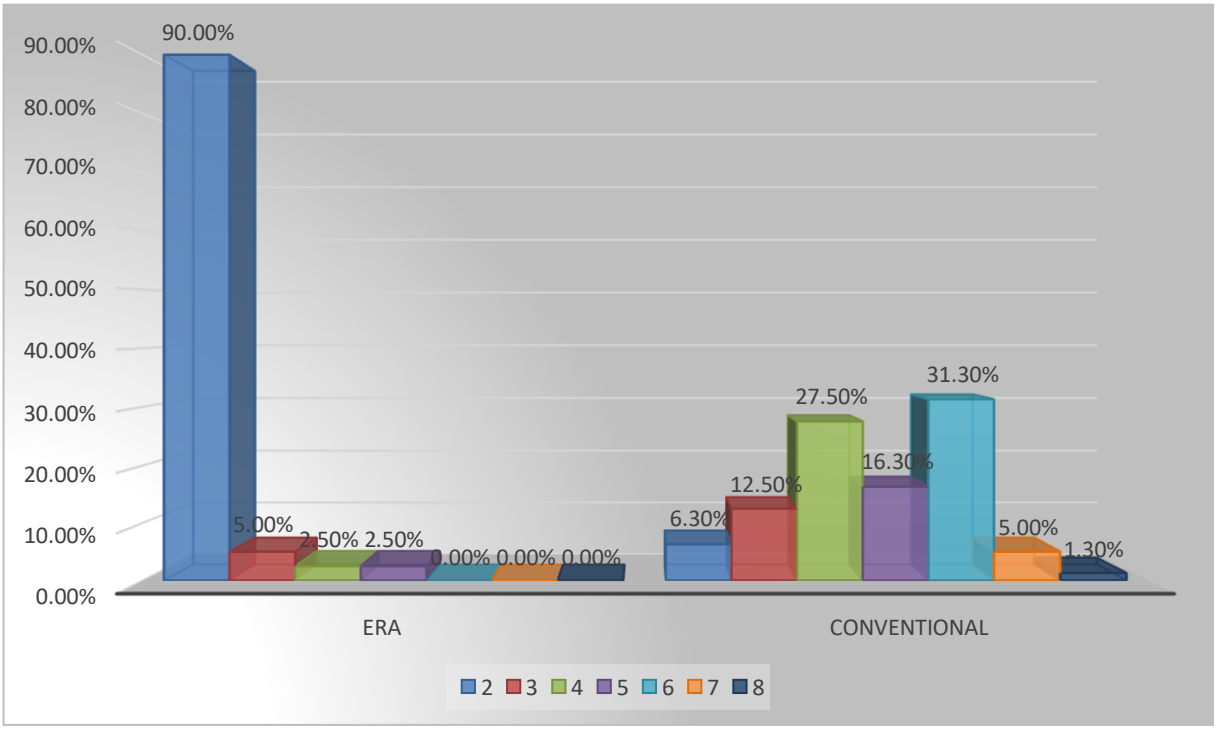


Table no.5: Distribution of carbohydrate loading among the ERAS and Conventional group

CARBOHYDRATE LOADING	ERAS	Conventional	Total
GIVEN	76	0	76
	95.0%	0.0%	47.5%
NOT GIVEN	0	80	80
	0.0%	100.0%	50.0%
REFUSED	4	0	4
	5.0%	0.0%	2.5%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.001			

The table shows the distribution carbohydrate loading between ERAS group and conventional group. Among the 80 women of ERAS 76 women have received carbohydrate loading which is 95.0% and 4 women refused to receive the carbohydrate loading which is 5.0%.

Among the 80 women of conventional group none of them received carbohydrate loading which is 100%

This comparison of carbohydrate loading between ERAS and conventional group shows p value of 0.001 which is less than 0.05, thus showing high statistical difference

Graph no.5: Bar diagram showing distribution of carbohydrate loading among ERAS and conventional group.

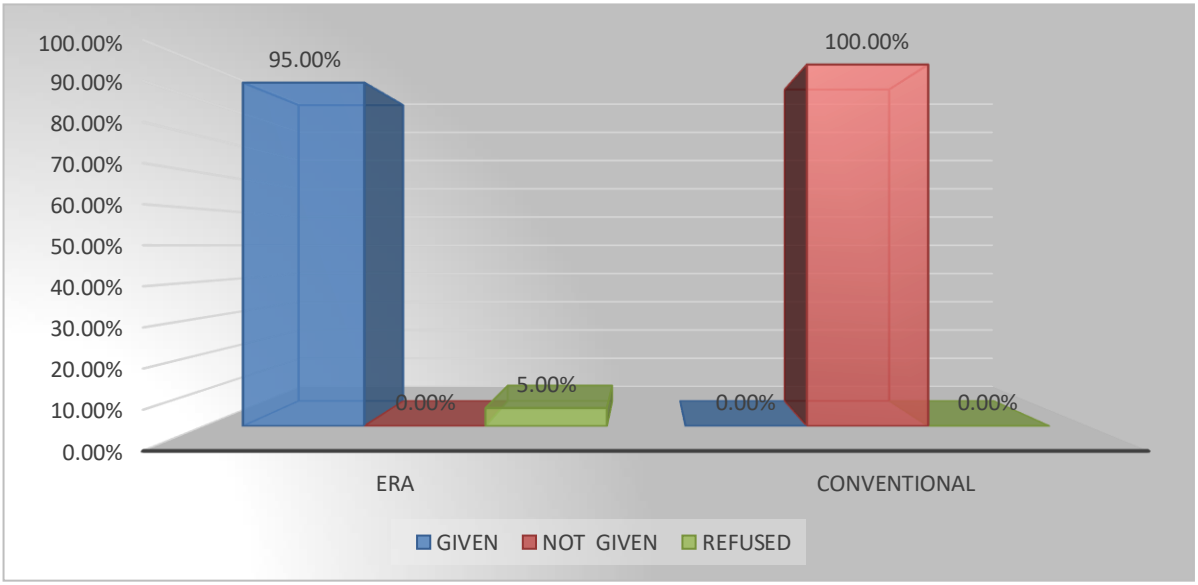


Table no .6: Table showing the distribution of time of antibiotic administration before the elective surgery among ERAS and conventional group

ANTIBIOTICS	ERAS	Conventional	Total
1HR BEFORE	0	69	69
	0.0%	86.3%	43.1%
30MINS BEFORE	0	10	10
	0.0%	12.5%	6.3%
45MINS BEFORE	0	1	1
	0.0%	1.3%	.6%
BEFORE SKIN INCISION	80	0	80
	100.0%	0.0%	50.0%
TOTAL	80	80	160
	100%	100%	100.0%
p value - .001			

This table shows the distribution of time of antibiotics administration before elective surgery among both groups. Among the 80 women of ERAS group all received antibiotics before skin incision which is 100%

Among the 80 women of conventional group 69 received antibiotics 1hr before which is 86.3%, 10 women received before 30mins which 12.5%, 1 woman received 45mins before which is 1.3%.

This comparison of time of administration of antibiotics before the elective surgery between the ERAS and conventional group shows p value of 0.001 which is less than 0.05, thus showing high statistical difference.

<u>Graph no .6:</u> Bar diagram showing distribution of time of antibiotics administration before elective surgery among ERAS group and conventional group

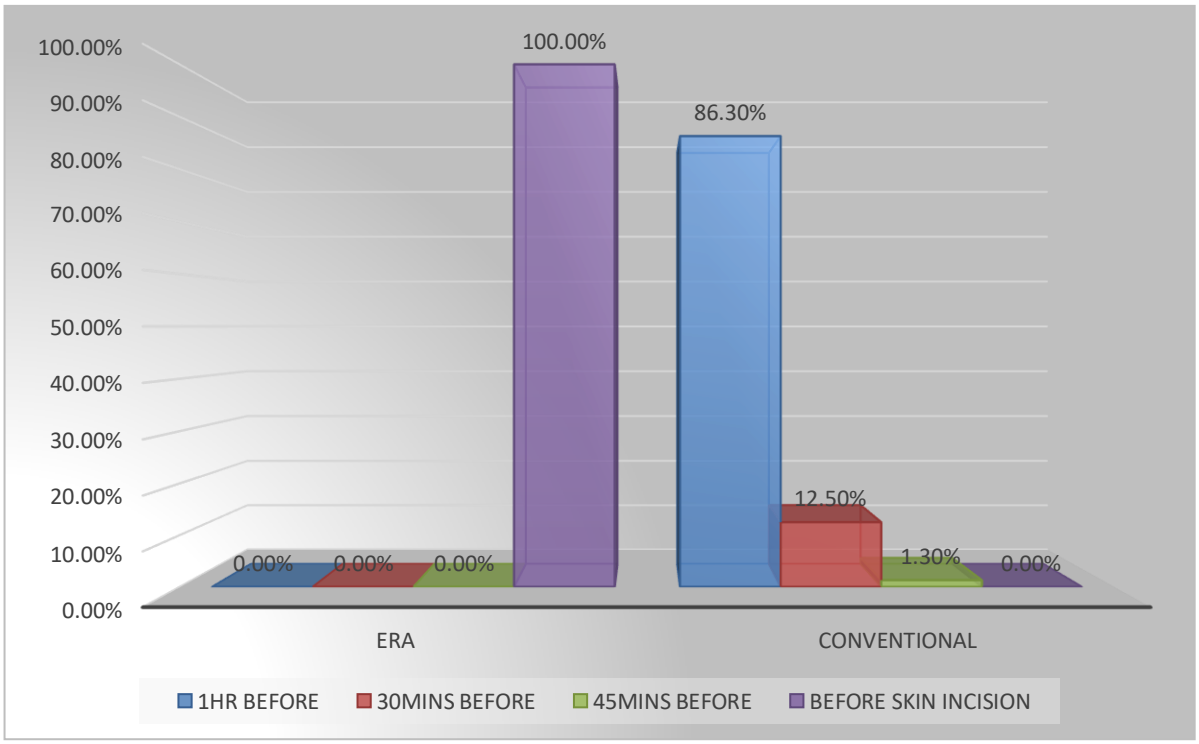


Table no .7: Table showing the distribution of post operative nausea and vomiting prophylaxis among ERAS and conventional group

POST OP NAUSEA AND VOMITTING PROPHYLAXSIS	ERAS	Conventional	Total
INJ.ONDANSETRON 4MG, INJ DEXAMETHASONE 8MG	80	0	80
	100.0%	0.0%	50.0%
NOT GIVEN	0	80	80
	0.0%	100.0%	50.0%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.001			

This table shows the distribution of post op nausea and vomiting prophylaxis among ERAS and conventional group. Among 80 women of ERAS group all of them received the prophylaxis which is 100 %. Whereas the 80 women conventional group none of them received the post o nausea and vomiting prophylaxis.

This comparison of post op nausea and vomiting prophylaxis between both groups has showed a p value of 0.001 which is less than 0.05, thus showing statistical significance.

Table no.8: Distribution of duration of cord clamping in elective caesarean delivery among ERAS and conventional groups

DELAYED CORD CLAMPING	ERAS	Conventional	Total
1	80	0	80
	100.0%	0.0%	50.0%
30	0	72	72
	0.0%	90.0%	45.0%
60	0	8	8
	0.0%	10.0%	5.0%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.001			

This table shows the distribution of duration of cord clamping in elective cesarean delivery among ERAS and conventional groups. Among 80 women of ERAS group the cord clamping was done after 1 min in all of them which is 100%. Among the 80 women of conventional group in 72 of the cases cord clamping done after 30sec which is 90%, in 8 of the cases cord clamping was done after 1min which is 10%.

This comparison has showed a p value of 0.001 which is less than 0.05, showing statistical significance.

Graph no.7: Bar diagram showing the comparison of duration of cord clamping in elective caesarean delivery among ERAS and conventional groups.

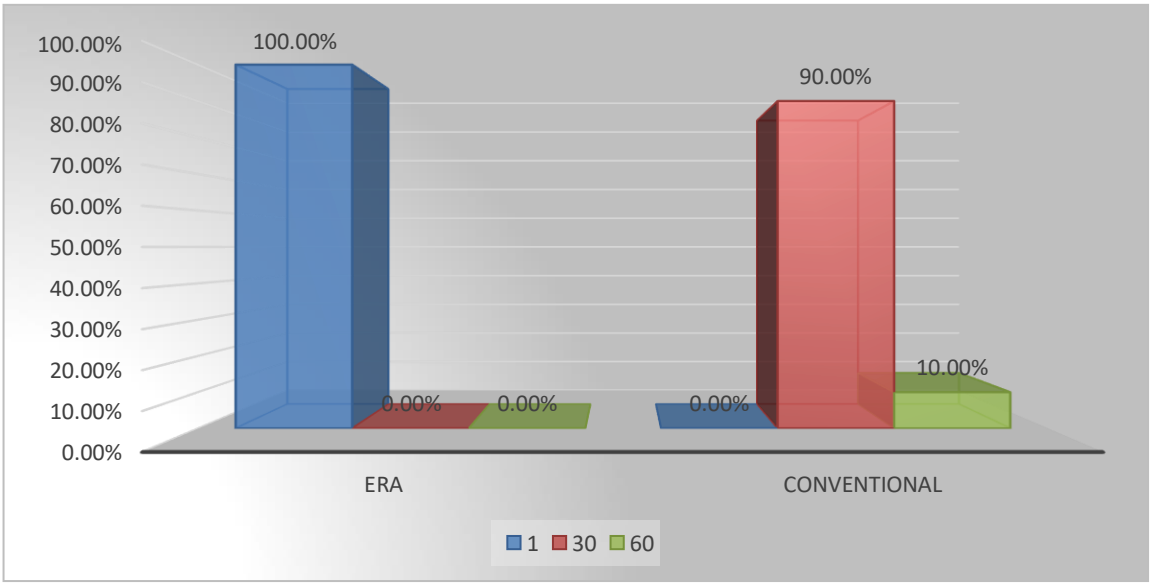


Table no.9: Distribution of number of doses of analgesia administered among the ERAS and the conventional group

ANALGESIA	ERAS	Conventional	Total
INJ DOLO 2DOSES	64	0	64
	80.0%	0.0%	40.0%
INJ DOLO 2DOSES, INJ DYNAPAR AQ 1 DOSE	13	0	13
	16.3%	0.0%	8.1%
INJ DOLO 2DOSES, INJ DYNAPAR AQ 2 DOSE	3	0	3
	3.8%	0.0%	1.9%
INJ DYNAPAR 2DOSES	0	63	63
	0.0%	78.8%	39.4%
INJ DYNAPAR 3DOSES	0	15	15
	0.0%	18.8%	9.4%
INJ DYNAPAR 4DOSES	0	2	2
	0.0%	2.5%	1.3%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.001			

This table shows the distribution of number of doses of analgesia women received in each group.

Among the 80 women of ERAS group 64 received only 2 doses of Inj.Dolo which is 80%, 13 received additional 1 dose of Inj.Dynapar along with 2 doses of Inj.Dolo which is 16.3%, 3 patients received additional 2 doses of Inj.Dynapar along with 2doses of Inj.Dolo which is 3.8%

Among the 80 women of Conventional group 63 received 2 doses Inj. Dynapar 78.8%, 15 received 3doses 18.8%, 2 received doses of Inj.Dynapar 4 doses which is 2.5%

This comparison between 2 groups has shown p value of 0.001 which is less than 0.05, thus showing statistical significance

<u>Graph no .8:</u> Bar diagram showing the comparison of number of doses of analgesia administered among women of ERAS and conventional group

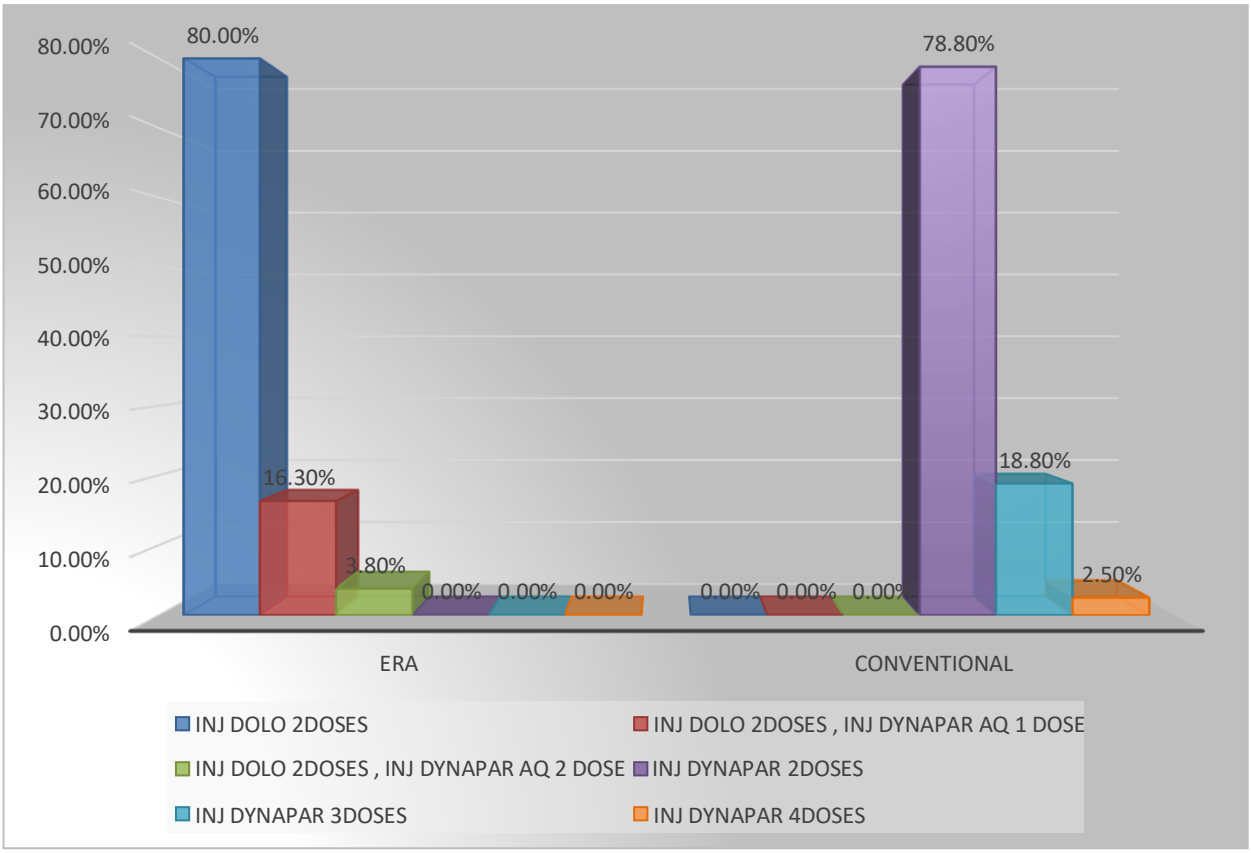


Table no.10: Distribution of time of oral intake from the time of surgery among the ERAS and conventional group cases

TIME OF ORAL INTAKE FROM TIME OF SURGERY	ERAS	Conventional	Total
2	1	0	1
	1.3%	0.0%	.6%
4	35	0	35
	43.8%	0.0%	21.9%
5	30	1	31
	37.5%	1.3%	19.4%
6	14	5	19
	17.5%	6.3%	11.9%
7	0	12	12
	0.0%	15.0%	7.5%
8	0	45	45
	0.0%	56.3%	28.1%
10	0	17	17
	0.0%	21.3%	10.6%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.001			

This table shows the distribution of time intake from the time of surgery among both groups.

Among the 80 women of the ERAS group 1 women had oral fluids within 2hrs of surgery which is 1.3%, 35 had oral fluids within 4hrs of surgery which is 43.8%, 30 had oral fluids 5 hours after surgery which is 37.5%, 14 had oral fluids 6hrs of surgery which is 17.5%

Among the 80 women of conventional group 1 women had oral fluids within 5hrs of surgery which is 1.3%, 5 had oral fluids 6hrs of surgery which is 6.3%, 12 had oral fluids 7hrs of surgery which is 15%, 45 had oral fluids 8hrs of surgery which is 56.3%, 17 had oral fluids 10 hours from surgery which is 2.3%.

This comparison has shown a p value of 0.001 which is less than 0.05, thus showing statistical significance.

Graph no.9: Bar diagram showing the distribution of time intake of oral fluids from the time of surgery between the ERAS and conventional group.

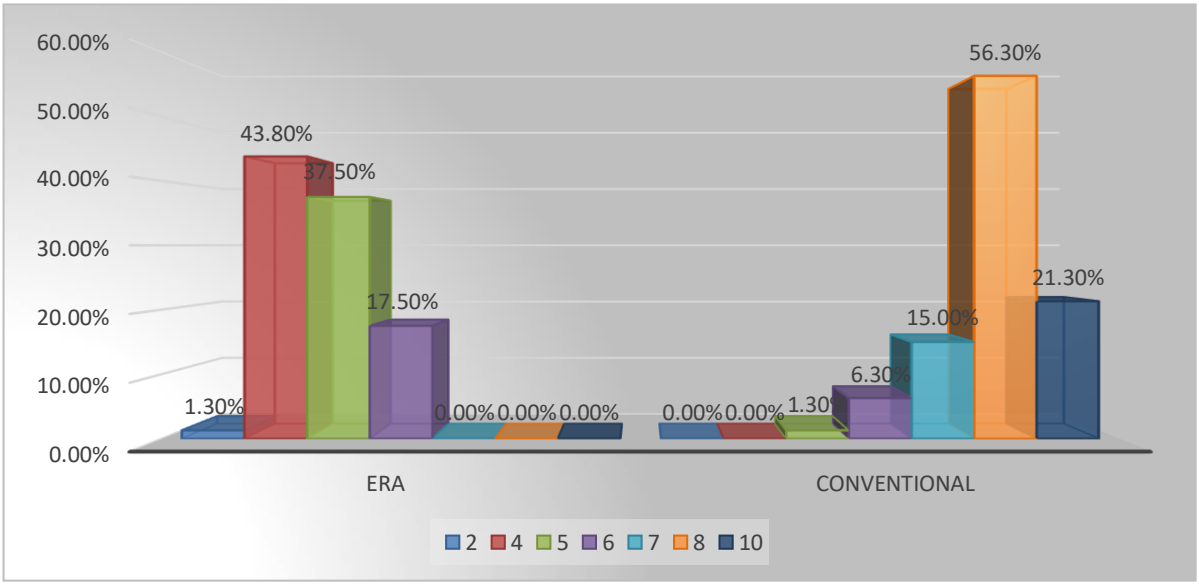


Table no. 11: Distribution of patient satisfaction score among the ERAS and conventional groups

PATIENT SATISFACTION SCORE	ERAS	Conventional	Total
4	0	5	5
	0.0%	6.3%	3.1%
5	0	24	24
	0.0%	30.0%	15.0%
6	2	35	37
	2.5%	43.8%	23.1%
7	21	15	36
	26.3%	18.8%	22.5%
8	38	1	39
	47.5%	1.3%	24.4%
9	19	0	19
	23.8%	0.0%	11.9%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.001			

This table shows the distribution of patient satisfaction score among ERAS and conventional group

Among the 80 women of the ERAS group 2 of them which is 2.5% gave a score of 6, 21 which is 26.3% gave a score of 7, 38 which is 47.5% gave a score of 8, 19 which is 23.8% gave a score of 9

Among the 80 women of the conventional group 5 of them which is 6.3% gave a score of 4, 24 which is 30% gave a score of 5, 35 which is 43.8% gave a score of 6, 15 which is 18.8% gave a score of 7, 1 which is 1.3% gave a score of 8.

This comparison shows p value of 0.001 which is less than 0.05, thus showing statistical significance.

<u>Graph no.10:</u> Distribution of patient satisfaction score among the women of ERAS and the conventional group.

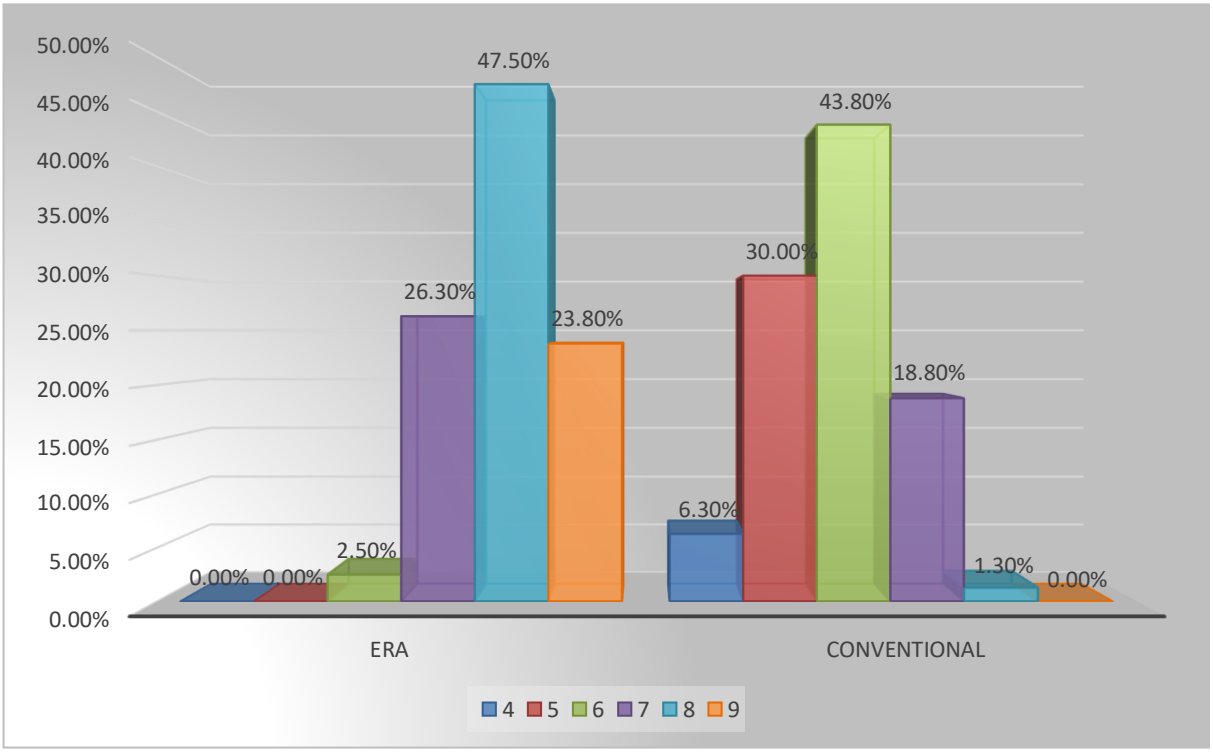


Table no.12: Distribution of patient pain score among cases of ERAS and conventional groups

PATIENT PAIN SCORE	ERAS	Conventional	Total
2	36	0	36
	45.0%	0.0%	22.5%
3	39	9	48
	48.8%	11.3%	30.0%
4	4	46	50
	5.0%	57.5%	31.3%
5	1	21	22
	1.3%	26.3%	13.8%
6	0	4	4
	0.0%	5.0%	2.5%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.001			

This table showing the distribution of patient pain score among the cases of ERAS and conventional group

Among the 80 women of ERAS group 36 which is 45% had score of 2, 39 which is 48.8% gave a score of 3, 4 which is 5% gave a score of 4, 1 which is 1.3% gave a score of 5.

Among the 80 women of the conventional group 9 which is 11.3% gave a score of 3, 46 which is 57.5% gave a score of 4, 21 which is 26.3 % gave a score of 5, 4 which is 5% gave a score of 6

This comparison shows a p value of 0.001, which is less than 0.05, thus showing statistical significance.

Graph no.11: Bar diagram showing the distribution of patient pain score among the cases of ERAS and conventional group

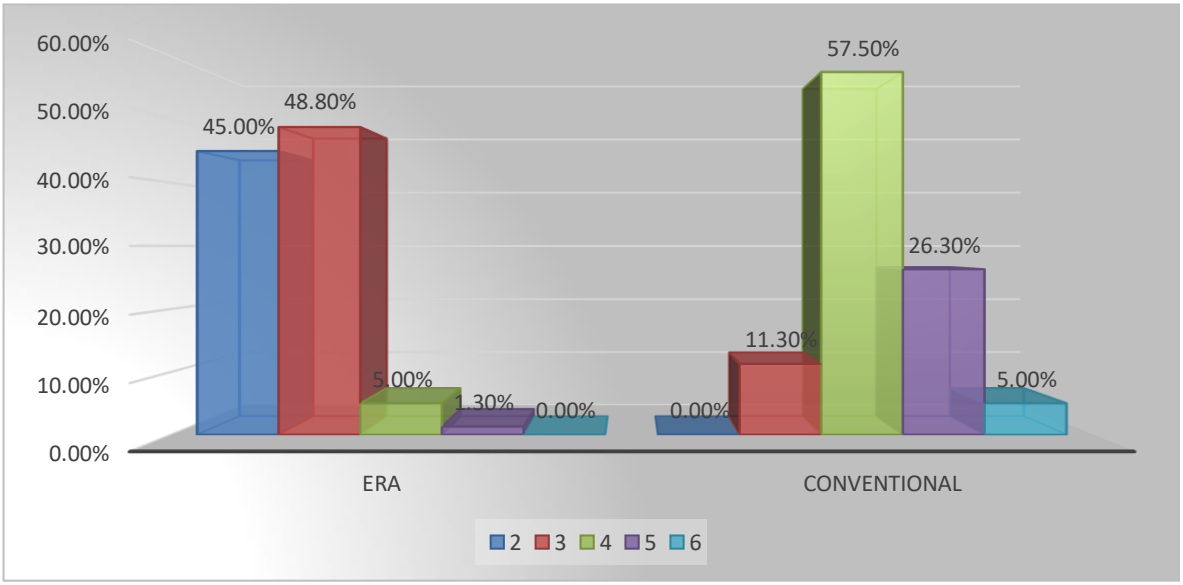


Table no.13: Distribution of perinatal outcome among the cases of ERAS and conventional groups

PERINATAL OUTCOME	ERAS	Conventional	Total
NIL	1	0	1
	1.3%	0.0%	.6%
MOTHERS SIDE	70	52	122
	87.5%	65.0%	76.3%
NICU-MAS	1	3	4
	1.3%	3.8%	2.5%
NICU-MSL	0	2	2
	0.0%	2.5%	1.3%
NICU-OBSERVATION	5	11	16
	6.3%	13.8%	10.0%
NICU-RDS	3	10	13
	3.8%	12.5%	8.1%
NICU-TACHYPNEA	0	2	2
	0.0%	2.5%	1.3%
TOTAL	80	80	160
	100%	100%	100.0%
p value- 0.023			

This table showing the distribution of perinatal outcome among cases of ERAS and conventional group

Among the 80 women of the ERAS group 70 which is 87.5% babies given mothers side, 1 baby which is 1.3% went to NICU because of meconium aspiration, 5 babies which is 6.3% went to NICU for observation, 3 babies which is 3.8% went to NICU because of RDS

Among the 80 women of conventional group 52 babies which is 65% given mothers side, 5 babies which is 6.3% went to NICU because of meconium aspiration, 11 babies which is 13.8% went to NICU for observation, 10 babies which is 12.5% went to NICU because of RDS, 2 babies which 2.5% went to NICU because of tachypnea.

This comparison shows p value of 0.023 which is more than 0.05, thus showing no statistical significance.

<u>Graph no.12:</u> Bar diagram showing distribution of perinatal outcome among the cases of ERAS and conventional group.

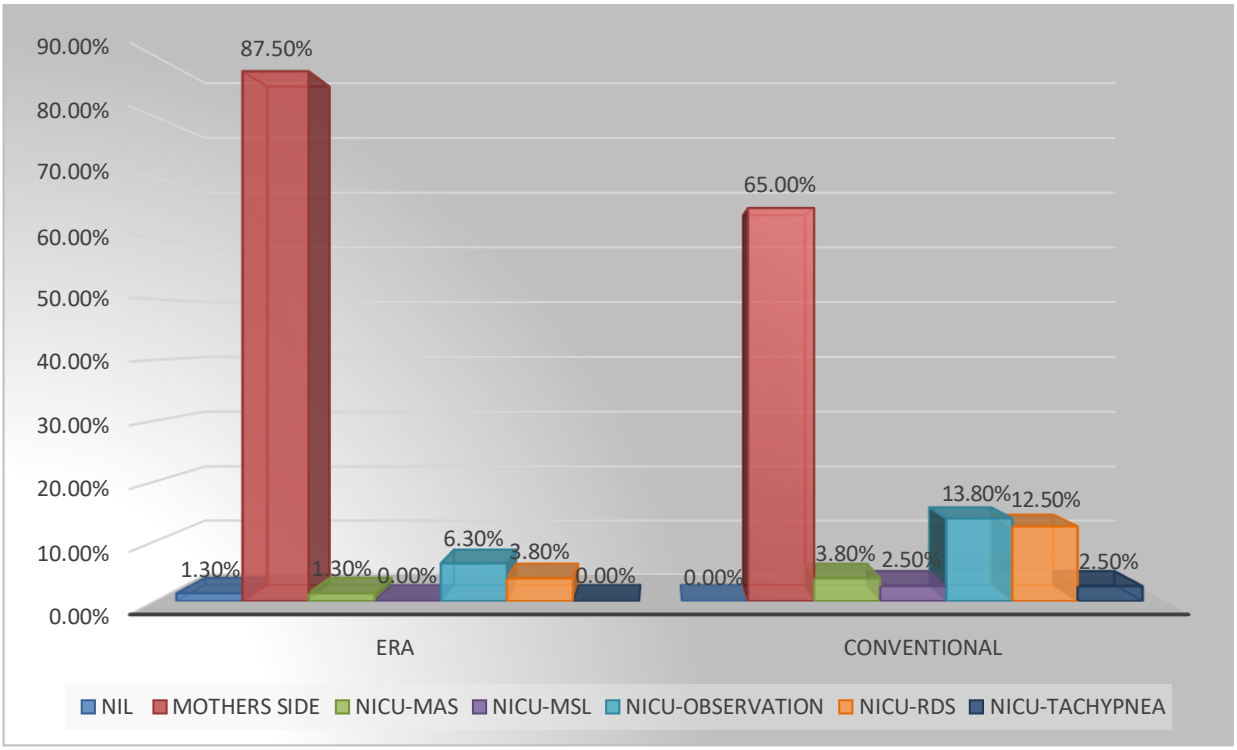


Table no 14: Distribution of time of mobilization from time of surgery among ERAS and conventional group.

Variables	Groups	Mean	Std Dev	Mean Difference	p value
MOBILISATION FROM TIME OF SURGERY	ERAS	9.65	1.406	-17.5	0.001
	CONVENTIONAL	27.15	5.029		

This table showing the distribution of time of mobilization from time of surgery among ERAS and conventional group. The mean duration among ERAS group women is 9 hrs, mean duration among conventional group is 27hrs.

This comparison shows p value of 0.001 which is less than 0.05, thus showing high statistical significance.

Graph no 13: Bar diagram showing the distribution of time of mobilization from time of surgery among ERAS and conventional group

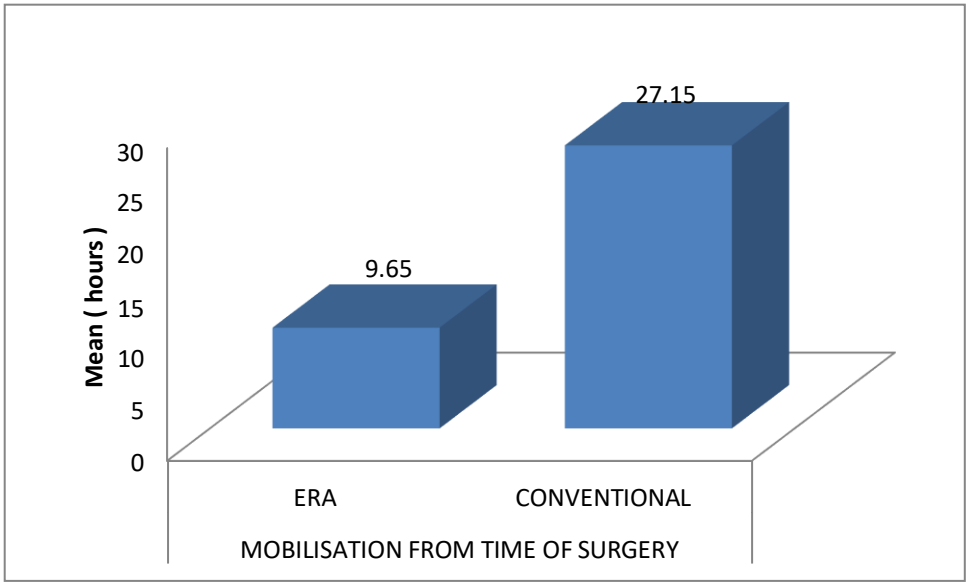


Table no 15: Distribution of time interval of removal of catheter from time of surgery among ERAS and conventional group

Groups	N	TIME INTERVAL OF REMOVAL OF CATHETER		Mean difference	p value*
		Mean	Std. Deviation		
ERAS	80	8.28	1.736	-20.200	0.001
Conventional	80	28.48	6.812		

This table showing the distribution of time interval of removal of catheter from time of surgery among ERAS and conventional group. The mean duration among ERAS group women is 8 hours, mean duration among conventional group is 28 hrs.

This comparison shows p value of 0.001 which is less than 0.05, thus showing high statistical significance.

Graph no 14: Bar diagram showing the distribution of time interval of removal of catheter from time of surgery among ERAS and conventional group

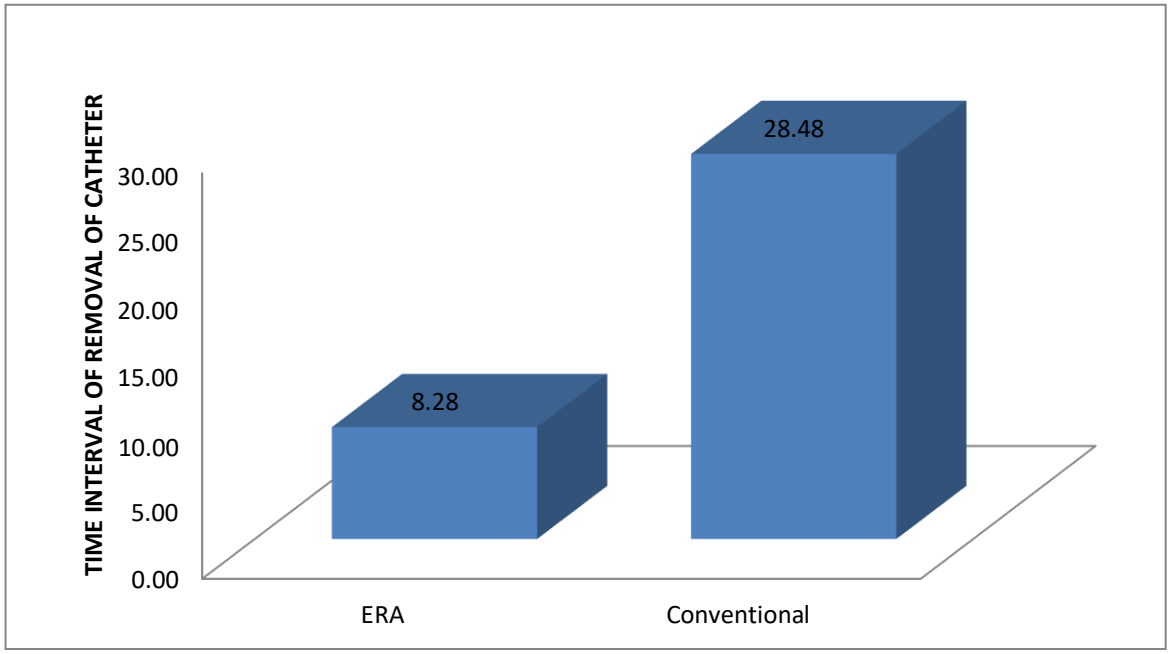


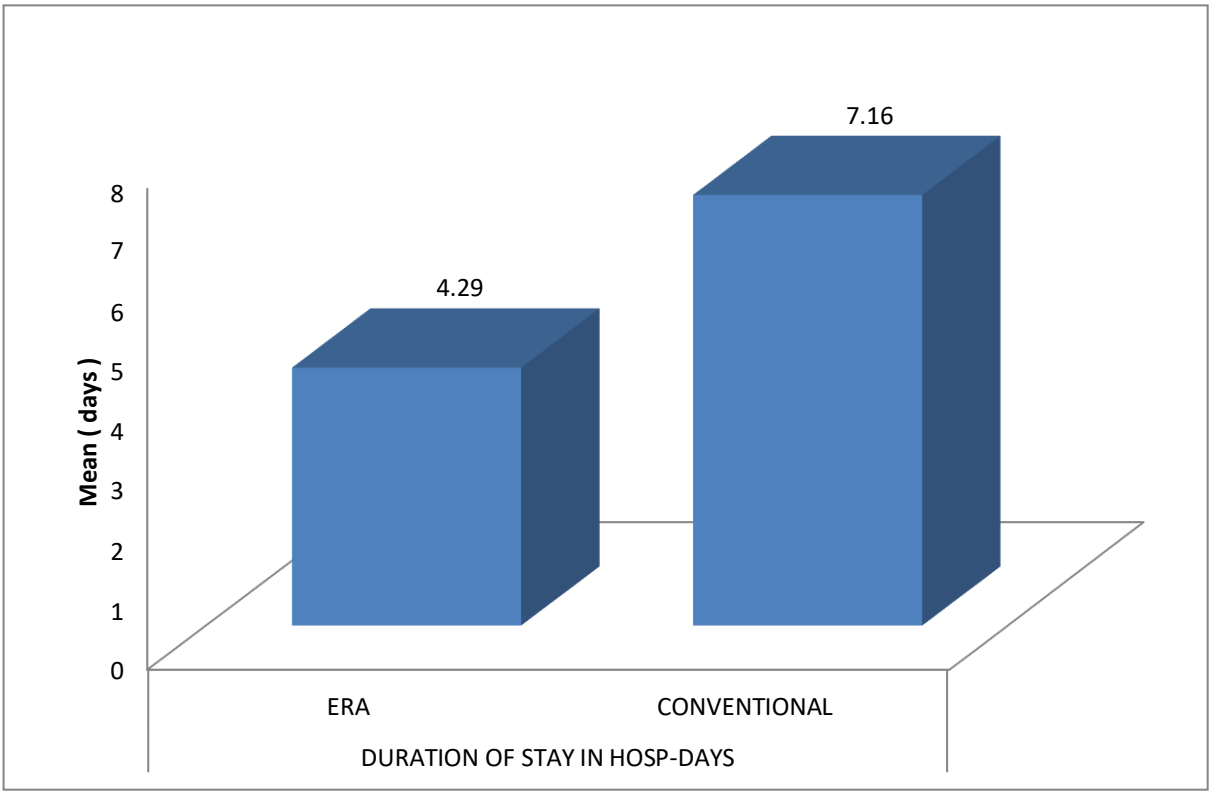
Table no.16: Distribution of duration of stay in hospital among ERAS group and conventional group

Variables	Groups	Mean	Std Dev	Mean Difference	p value
DURATION OF STAY IN HOSP-DAYS	ERAS	4.29	0.814	-2.875	0.001
	CONVENTIONAL	7.16	0.934		

This table showing the distribution of duration of stay in hospital among ERAS group and conventional group. The mean duration of stay in ERAS group is 4days. Mean duration of stay in conventional group is 7days.

This comparison shows p value of 0.001 which is less than 0.05, thus showing high statistical significance.

Graph no.15: Bar diagram showing the distribution of duration of stay in hospital among ERAS and conventional group.



DISCUSSION

This study was conducted to observe the effectiveness of ERAS protocols when compared to the conventional protocols among women who underwent elective cesarean section. Among 160 samples collected, statistical evaluation was done to analyze each factor and to understand the effectiveness of ERAS protocol for early discharge from hospital.

In our study, samples were collected from 160 pregnant women who are undergoing elective LSCS after meeting the inclusion criteria at Shri B.M. Patil's Medical College, Hospital and Research Centre. Among them 80 were taken under ERAS protocol group and 80 were taken under conventional protocol group.

In our study age comparison had no statistical significance among both groups ,the mean age among ERAS group was 26years and among conventional group was 25.3years Similar results were noted in other studies .

STUDIES	GROUP 1 (mean age)	GROUP 2 (mean age)
Sara Taha Mostafa	25yrs	26yrs
Jalilian et. Al	27.8yrs	29.1yrs
Vasantha Kumar J et. Al	24yrs	25yrs
Our study	26yrs	25.3yrs

In our study gestational age comparison among both groups had no statistical significance. which was similar to other studies results

STUDIES	GROUP 1	GROUP 2
Sara Taha Mostafa	38.7weeks	39.1weeks
Emily E. Fay et. Al	37.7weeks	40weeks
Our Study	38.1weeks	39weeks

In our study among the 80 women of ERAS 76 women (95.0%) have received carbohydrate loading and 4 women (5.0%) refused to receive the carbohydrate loading .Among the 80 women of conventional group none of them received carbohydrate loading which was 100% showing p value of 0.001 which is less than 0.05, thus showing high statistical difference

In a study conducted by S Awad et. Al, 12 trials which included 1198 patients, there was statistically significant reduction in duration of hospital stay was seen in patients who received carbohydrate treatment before the surgery (509 patients) when they compared with controls(689patients). In their study they stated that carbohydrate treatment causes attenuation of insulin resistance post operatively and thereby reduced length of stay in hospital (p value 0.007). [(60)] which was consistent with our findings which proved ERAS group patients who received carbohydrate treatment 95% had reduced length of stay (mean – 4days) when compared to conventional group patients.

In a study conducted by Mark D Smith et. Al, they studied all randomised controlled trials of preoperative carbohydrate drink and compared with placebo or the regular

preoperative fasting. In 19 trials including 1351 women had reduced duration of hospital stay (0.03days shorter, 95% CI) which was similar as our study in which ERAS group women discharged in 4days. In 14 trials including 913 participants carbohydrate treatment before surgery had no effect on the postoperative complications and was safe, which was consistent to findings in our study. [57]

In a study conducted by D K Bilku et. Al 17 trails of 1445 patients were studied and in 6 trials the carbohydrate treatment before surgery had positive influence on patient comfort after surgery like hunger, thirst, nausea, anxiety. Similar observations were seen during our study among the 95% women of ERAS group [59]

In our study among the 80 women of ERAS group all received antibiotics before skin incision which is 100%. Among the 80 women of conventional group 69 (86.3%) received antibiotics 1hr before , 10 women (12.5%) received before 30mins , 1 woman (1.3%) received 45mins before and the comparison of time of administration of antibiotics before the elective surgery between the ERAS and conventional group shows p value of 0.001 which was less than 0.05, thus showing high statistical difference.

In a study conducted by Kiamal A J et. Al,1316 term cesarean deliveries in whom antibiotics were given prior to skin incision and they found that rate of SSI decreased from 6.4 to 2.5 % (p= 0.002). Which was not consistent with our study in which ERAS group (antibiotics were given just before skin incision) and conventional group none of them had SSI.

A study conducted by Scott A Sullivan et. Al 357 subjects were included, they have compared two groups, antibiotics 15 to 60 minutes prior and antibiotics just before

cord clamping unlike in our study were antibiotics were given just before skin incision and 1hr prior to surgery concluded that administration of prophylactic antibiotics prior to incision resulted in less total post operative infection morbidity compared to giving it priorly. (64)

Among 80 women of ERAS group all of them received post op nausea and vomiting prophylaxis which is 100 %. Whereas the 80 women conventional group none of them received the post op nausea and vomiting prophylaxis and the comparison of post op nausea and vomiting prophylaxis between both groups has showed a p value of 0.001 which was less than 0.05, thus showing statistical significance.

In a study conducted by Sara Taha Mostafa 96 women were included in which ERAS group 48 patients received postoperative nausea and vomiting prophylaxis and conventional group did not receive it. Which showed statistically significant ($p<0.0366$) reduction of Intra op nausea and vomiting and post op nausea and vomiting in study group when compared to control group which was higher. These results are concordant with our study. (134)

In a study conducted by James D Griffiths et. Al 41 studies including 5046 women were studied concluded that there is little evidence regarding combination treatments are better than single agents in preventing post op nausea and vomiting prophylaxis. (106)

In our study the mean duration of time interval of removal of catheter from time of surgery in ERAS group was 8hrs and mean duration among conventional group was 28hrs and comparison shows p value of 0.001, thus showing statistical significance.

In a study conducted by Alper Basbug et. Al 134 women were studied in which 62 women in early group and 74 women in late group. The post op mobilization (p=0.01) and duration of stay in hospital were significantly lower among early group (0.009) which are similar to results among our study. [135]

In a study conducted by Hany Abdel -Aleem et. Al 3 studies (840) women prolonged catheterization was associated with increased duration of time to ambulation (4.34 hours) and longer duration of stay in hospital (0.62 days) . which are concordant with our study results among ERAS group. [125]

In a study conducted by Hemantha Senanayake concluded that performing cesarean sections without bladder catheterization had no complications during surgery and no safety related issues. It was also concluded that the risk of UTI decreased. [123]

In our study the mean pain score among the patients of ERAS group 2.6 which was less when compared to Sara Taha Mostafa study, Elgohary et. Al. Among the conventional group patients it was 4.2, which was similar to Sara Taha Mostafa study, and less compared to Elgohary et.Al study.

STUDIES	GROUP 1	GROUP 2
Sara Taha Mostafa	3.3	4.3
Elgohary et. Al	3.1	5.3
Our study	2.6	4.2

In our study among the ERAS group maximum number of women(47.5%) gave satisfaction score of 8 and the mean score was 7.9 which was less when

STUDIES	GROUP 1	GROUP 2
Sara Taha Mostafa	8.2 (max score 10)	5.6(max score 10)
Polle. S. W et. Al	3.8 (max score 5)	3.3 (max score 5)
Our study	7.9 (max score 10)	5.7(max score 10)

compared to Sara Taha Mostafa study .Among the conventional group maximum percentage of women (43.8%) gave a score of 6 and the mean was 5.7 which was similar to other standard studies discussed above.

In our study the mean duration of time of mobilization from time of surgery among ERAS group women is 9 hours, mean duration among conventional group is 27hrs and comparison shows p value of 0.001 which is less than 0.05, thus showing high statistical significance. The mean duration of stay in hospital among ERAS group is 4days and conventional group is 7 days and the comparison shows p value of 0.001, thus showing statistical significance.

In a study conducted by Sara Taha Mostafa which included 96 women, they observed that early duration of ambulation increased considerably (p value .001) from 33.0% - 51.0% after the implementation of ERAS protocols concluded that encouraging early ambulation with early initiation of intestinal motility there is high rates of satisfaction and decreased number of hospitals stay similar to our study. [134]

In a study conducted by Pilkington et.al found a decrease in duration of stay in hospital from 3 to 6 days before implementation of ERAS protocols to 1 to 5 days with the mean of 2.5 days. which is very less duration when compared to our study where mean duration in ERAS group is 4days which was a drawback in our study as patients were not comfortable for early discharge because of the fear of wound gaping. [128]

STUDIES	**GROUP 1**	**GROUP 2**
Meyer et. Al	3 days	4days
Monique Hedderson et. Al	4days	4days
Our study	4days	7days
Pilkington et. Al	2.5days	4.5days

In our study the time of first ambulation among ERAS group was 9hrs which was longer when compared to Sara Taha Mostafa (3.8hrs), and it was lesser when compared to Monique et. Al

Among the conventional group time of first ambulation was 27hrs which was longer when compared with both Sara Taha Mostafa and Monique et. Al

STUDIES	GROUP -1 (ERAS)	GROUP-2 (CONVENTIONAL)
Monique Hedderson et. Al	13hrs	16hrs
Sara Taha Mostafa	3.8hrs	7.06hrs
Our study	9hrs	27hrs

CONCLUSION

It is known that in conventional protocols patient satisfaction rates are less and post operative difficulties are more which leads to increased duration of hospital stay and reduced postoperative recovery thus a burden to both patient and hospital.

It is evident from the study conducted here that ERAS protocols proved to be better in aspects like better tolerance to early oral feeds post operatively, pain scores, patient satisfaction , early ambulation which led to early recovery and early discharge thus reducing the hospital and patient burden , which helps boost the confidence of the treating doctor and also the patient when compared with the standard conventional protocols.

Although only a small population of 160 women were included in the study, the statistical analysis strongly emphasizes that ERAS protocols had maximum patient benefit.

SUMMARY

The term "enhanced recovery after surgery" (ERAS) refers to an approach that integrates multiple evidence-based perioperative care components to hasten patient recovery. It achieves a predictable improvement in care quality and standardises postoperative treatment. One of the most frequent major operations performed worldwide is a Caesarean section. Scheduled or elective procedures account for an increasing portion of all caesarean sections. Caesarean section birth has been associated with longer hospital stays than spontaneous birth, and the majority of patients had to stay in the hospital for at least four days after a planned Caesarean procedure. The management of caesarean and postoperative care significantly impacted the nation's maintenance and costs.

Most of the studies supported that ERAS protocols are superior to conventional protocols; a detailed clinical observational study was conducted in 160 pregnant women undergoing elective cesarean section in Shri B.M. Patil's Medical College, Hospital and Research Centre, and statistical evidence of the association between ERAS and conventional protocols was acquired.

In our study it was observed that, age distribution, consanguinity had no statistical significance, and they showed no difference.

In our study 95% of women in ERAS group received the preoperative carbohydrate loading. In these women postoperatively there was reduced thirst , hunger .In patients of conventional protocol who did not receive carbohydrate loading they had increased postoperative thirst was noted .Thus carbohydrate loading preoperatively had proved benefit

In our study 100% of women in ERAS group all received antibiotics before skin incision. In these patients postoperatively when followed up none of them had surgical site infection or

any wound dehiscence .In women of conventional group 86.3% received antibiotics 1hr before, 12.5% received before 30mins , 1.3% received 45mins and women of this group none of them had surgical site infection .Thus in our study both groups irrespective of timing of antibiotics had similar results.

In our study among the ERAS group women pain scores were less , which was due to the combined benefit of paracetamol and NSAIDS together .

In our study the patient satisfaction scores were higher among the women of ERAS group which proved that ERAS protocols had good patient benefit .

In our study the mean duration of time interval of removal of catheter from time of surgery in ERAS group was 8hrs . In these women we have noticed decreased duration of time of ambulation from surgery , decreased incidence of UTI and decreased duration of hospital stay.

In our study the time of first ambulation among ERAS group was 9hrs which was longer when compared to other standard studies , this was the limitation of the study as patients had the fear of immediate ambulation would lead to wound dehiscence , counselling them was a huge task . In spite of these limitations ERAS group women were discharged in 4days wen compared to conventional group women who were discharged after 7days.

It hereby implies that, ERAS protocols among elective caesarean patients proved improved patient benefit.

This study clearly showed that implementing ERAS protocols for patients undergoing elective caesarean section had more patient satisfaction, early recovery, early discharge from hospital.

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BLDE (DEEMED TO BE UNIVERSITY)
SHRI B.M. PATIL MEDICAL COLLEGE HOSPITAL AND RESEARCH CENTER, VIJAYAPURA-586103

INFORMED CONSENT FOR PARTICIPATION IN DISSERTATION/RESEARCH

IN ACCORDANCE WITH THE DECLARATION OF HELSINKI.

I, the undersigned,_____, D/O W/O_____, aged___years, ordinarily resident of_____do hereby state/declare that **Dr.** NIMMALA SNIGDHA of Shri. B. M. Patil Medical College Hospital and Research Centre has examined me thoroughly on _____ at _____(place) and it has been explained to me in my own language about the study. Further Dr. NIMMALA SNIGDHA informed me that he/she is conducting dissertation/research titled "Comparative study of pregnant women undergoing caesarean section after Enhanced recovery after surgery (ERAS) and conventional protocols" under the guidance of Dr SHOBHA SHIRAGUR requesting my participation in the study. I will also be contacted on the phone at one week, three months and six months to ask regarding my condition. Further Doctor has informed me that my participation in this study help in the evaluation of the results of the study, which is a useful reference to the treatment of other similar cases in the near future. The Doctor has also informed me that information given by me, observations made/ photographs/ video graphs taken upon me by the investigator will be kept secret and not assessed by the person other than my legal heir except for academic purposes or me.

The Doctor did inform me that though my participation is purely voluntary, based on the information given by me, I can ask any clarification during treatment/study related to diagnosis, the procedure of treatment, result of treatment or prognosis. At the same time, I have been informed that I can withdraw from my participation in this study at any time I want, or the investigator can terminate me from the course at any time but not the procedure of treatment and follow-up unless I request to be discharged.

After understanding the nature of dissertation or research, diagnosis made, mode of treatment. I am giving consent for the blood investigations and also for the follow-up.

I the undersigned Shri/Smt_____under my full conscious state of mind agree to participate in the said research/dissertation.

Signature of the patient:

Signature of Doctor:
Date: -

Place: -

SHRI BM. PATIL MEDICAL COLLEGE, HOSPITAL AND RESEARCH CENTRE, VIJAYAPURA - 586103

PROFORMA

Name:	Age:	Ip no:
Case.no:		
Address:	Occupation:	
DOA:	Contact no: 1.	
D.O. Study:		

1. **Chief complaints:**

2. **History of present pregnancy**:

3. **Obstetric history:** Obstetric score - G P L A

Gestational age –

4. **Past history:**

5. **Family history:**

6. **Personal history:**

7. **General physical examination:**

8. **Per abdomen:**

9. **Per vaginal:**
10. **Diagnosis:**
11. **Investigations:**

12. **Study parameters:**

Preoperative: Patient education:
NBM status:
Carbohydrate loading:

Intraoperative: Type of anaesthesia:

Antibiotics:

Post op nausea and vomiting prophylaxis:

Delayed cord clamping:
Intra-op findings:

Postoperative: Analgesia:

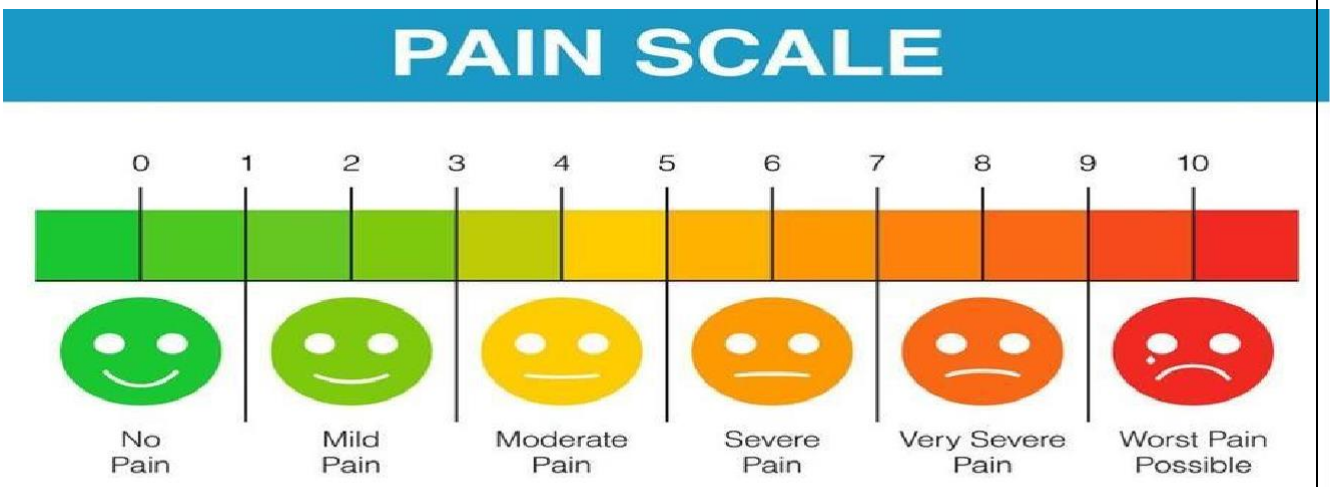
Time interval of oral intake from time of surgery:

Mobilisation from time of surgery:

Time interval of removal of catheter:

Patient satisfaction scale:

Patient pain score:



13. **Perinatal outcome:**

    Mothers side:

    NICU:

    Mortality:

14. **Date of discharge:**

15. **Duration of stay in hospital:**

16. **Follow up:**

MASTER CHART

S.NO	AGE	WEEKS	PREOPERATIVE	PATIENT EDUCATION	NBM STATUS	CARBOHYDRATE LOADING	INTRAOPERATIVE	ANTIBIOTICS	POST OP NAUSEA AND VOMITING PROPHYLAXSIS	CORD CLAMPING	ANALGESIA	TIME INTAKE OF ORAL INTAKE FROM TIME OF SURGERY	MOBILISATION FROM TIME OF SURGERY	TIME INTERVAL OF REMOVAL OF CATHETER	PATIENT SATISFACTION SCORE	PATIENT PAIN SCORE	PERINATAL OUTCOME	DATE OF DISCHARGE	FOLLOW UP
1	28YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	28HRS	24HRS	6	4	MOTHERS SIDE	08-07-202	PAIN ABDOMEN WHILE WORKING
2	27YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 3HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 4DOSES	8HRS	30HRS	24HRS	7	3	MOTHERS SIDE	05-07-202	NO COMPLAINTS
3	22YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOILDS 9HRS LIQUIDS 3HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	12HRS	36HRS	7	4	NICU-TACHYPNEA	18-07-202	NO COMPLAINTS
4	26YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	45MINS BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 3DOSES	7HRS	24HRS	36HRS	6	5	MOTHERS SIDE	18-07-202	NO COMPLAINTS
5	21YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOILDS 9HRS LIQUIDS 3HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	36HRS	24HRS	6	4	MOTHERS SIDE	02-08-202	NO COMPLAINTS
6	32YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	24HRS	48HRS	7	5	MOTHERS SIDE	03-08-202	NO COMPLAINTS
7	24YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 9HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	10HRS	28HRS	24HRS	6	4	MOTHERS SIDE	03-08-202	NO COMPLAINTS
8	26YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 2HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	30HRS	24HRS	7	6	MOTHERS SIDE	04-08-202	NO COMPLAINTS
9	25YRS	36	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 3HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	7HRS	24HRS	30HRS	5	4	MOTHERS SIDE	04-08-202	NO COMPLAINTS
10	25YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 2HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	7HRS	30HRS	24HRS	8	3	MOTHERS SIDE	09-08-202	NO COMPLAINTS
11	29YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 9HRS LIQUIDS 2HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	7HRS	28HRS	36HRS	7	4	MOTHERS SIDE	15-08-202	NO COMPLAINTS
12	25YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 3HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	7HRS	36HRS	24HRS	7	3	MOTHERS SIDE	19-08-202	NO COMPLAINTS
13	28YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 2HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	24HRS	6	4	NICU-RDS	20-08-202	NO COMPLAINTS
14	24YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 9HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	28HRS	36HRS	5	5	NICU-RDS	29-08-202	NO COMPLAINTS
15	25YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 9HRS LIQUIDS 6HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	10HRS	36HRS	30HRS	4	5	NICU-OBSERVATIO	30-08-202	NO COMPLAINTS
16	26YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 3HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	7HRS	24HRS	24HRS	7	3	NICU-OBSERVATIO	02-09-202	NO COMPLAINTS
17	22YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 3HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	7HRS	24HRS	36HRS	6	5	MOTHERS SIDE	01-09-202	NO COMPLAINTS
18	27YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOILDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	36HRS	5	5	NICU-OBSERVATIO	03-09-202	NO COMPLAINTS
19	25YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 3HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	36HRS	5	4	MOTHERS SIDE	19-09-202	NO COMPLAINTS
20	24YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 3HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	30HRS	24HRS	6	4	NICU-RDS	17-09-202	NO COMPLAINTS
21	23YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	24HRS	5	5	MOTHERS SIDE	24-09-2021	NO COMPLAINTS
22	28YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	36HRS	7	4	NICU-OBSERVATIO	23-09-2021	NO COMPLAINTS
23	30YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 3HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	24HRS	30HRS	5	4	MOTHERS SIDE	27-09-2021	NO COMPLAINTS
24	33YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	36HRS	48HRS	4	5	MOTHERS SIDE	04-10-2021	NO COMPLAINTS
25	23YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	6HRS	26HRS	24HRS	5	5	NICU-RDS	06-10-2021	NO COMPLAINTS
26	23YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	7HRS	24HRS	28HRS	5	4	NICU-MAS	04-10-2021	NO COMPLAINTS
27	26YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	24HRS	6	4	MOTHERS SIDE	07-10-2021	NO COMPLAINTS
28	24YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	10HRS	26HRS	24HRS	5	4	NICU-MAS	27-09-2021	NO COMPLAINTS
29	36YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	28HRS	24HRS	4	5	MOTHERS SIDE	07-10-2021	NO COMPLAINTS
30	23YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 7HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	26HRS	24HRS	6	5	MOTHERS SIDE	08-10-2021	NO COMPLAINTS
31	35YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 8HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	7HRS	24HRS	24HRS	4	5	MOTHERS SIDE	11-10-2021	NO COMPLAINTS
32	36YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	30MINS BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	26HRS	22HRS	4	5	MOTHERS SIDE	23-10-2021	NO COMPLAINTS
33	28YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 7HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	24HRS	5	4	NICU-MAS	27-10-2021	NO COMPLAINTS
34	23YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 9HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	10HRS	28HRS	24HRS	6	4	MOTHERS SIDE	25-10-2021	NO COMPLAINTS
35	25YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 2HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	24HRS	24HRS	6	5	NICU-OBSERVATIO	28-10-2021	PAIN ABDOMEN DURING WORK
36	22YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	10HRS	24HRS	24HRS	5	6	NICU-OBSERVATIO	27-10-2021	NO COMPLAINTS
37	25YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 12HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	24HRS	5	4	MOTHERS SIDE	27-10-2021	NO COMPLAINTS
38	21YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 12HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	28HRS	6	4	MOTHERS SIDE	01-11-2021	NO COMPLAINTS
39	24YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	24HRS	5	4	MOTHERS SIDE	01-11-2021	NO COMPLAINTS
40	24YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 7HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	28HRS	24HRS	5	4	MOTHERS SIDE	06-Nov	NO COMPLAINTS
41	27YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 7HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	24HRS	28HRS	5	6	MOTHERS SIDE	09-11-2021	NO COMPLAINTS
42	23YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	28HRS	5	4	MOTHERS SIDE	13-11-2021	NO COMPLAINTS

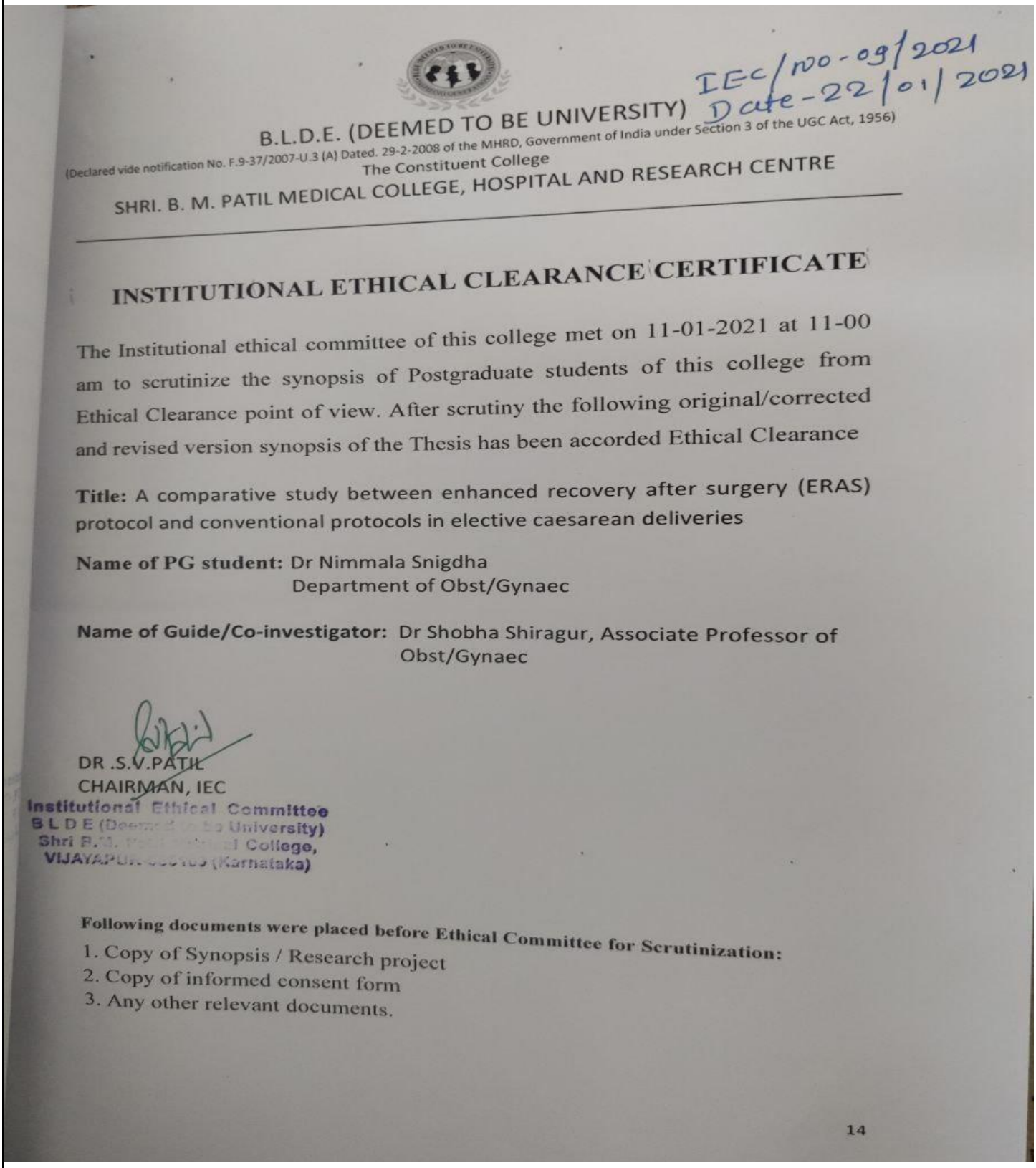
43	30YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	7HRS	24HRS	26HRS	5	4	MOTHERS SIDE	13-11-2021	NO COMPLAINT
44	36YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	24HRS	6	5	MOTHERS SIDE	17-11-2021	NO COMPLAINT
45	28YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	28HRS	6	4	NICU-OBSERVATIO	16-11-2021	NO COMPLAINT
46	25YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	24HRS	28HRS	6	5	MOTHERS SIDE	16-11-2021	NO COMPLAINT
47	25YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	24HRS	24HRS	5	4	MOTHERS SIDE	20-Nov	NO COMPLAINT
48	33YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	24HRS	26HRS	7	4	NICU-TACHYPNEA	25-11-2021	NO COMPLAINT
49	30YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 4DOSES	8HRS	24HRS	28HRS	7	4	NICU-RDS	28-11-2021	NO COMPLAINT
50	33YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	28HRS	6	5	NICU-OBSERVATIO	28-11-2021	NO COMPLAINT
51	19YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	10HRS	28HRS	28HRS	5	4	MOTHERS SIDE	30-11-2021	NO COMPLAINT
52	30YRS	41	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	28HRS	30HRS	6	5	NICU-MSL	07-12-2021	NO COMPLAINT
53	22YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	24HRS	5	6	NICU-OBSERVATIO	05-12-2021	NO COMPLAINT
54	37YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	24HRS	7	4	MOTHERS SIDE	06-12-2021	NO COMPLAINT
55	28YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	24HRS	6	5	MOTHERS SIDE	06-12-2021	NO COMPLAINT
56	28YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	30HRS	28HRS	5	4	NICU-OBSERVATIO	09-12-2021	NO COMPLAINT
57	21YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	24HRS	28HRS	6	4	MOTHERS SIDE	19-12-2021	NO COMPLAINT
58	30YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	5HRS	28HRS	26HRS	6	4	MOTHERS SIDE	20-12-2021	NO COMPLAINT
59	28YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	24HRS	5	4	MOTHERS SIDE	19-12-2021	NO COMPLAINT
60	27YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	48HRS	48HRS	6	4	MOTHERS SIDE	31-12-2021	NO COMPLAINT
61	35YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	28HRS	6	4	NICU-OBSERVATIO	30-12-2021	NO COMPLAINT
62	23YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	32HRS	6	4	MOTHERS SIDE	08-01-2022	NO COMPLAINT
63	24YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	7HRS	24HRS	26HRS	6	5	MOTHERS SIDE	10-01-2022	NO COMPLAINT
64	30YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	24HRS	5	4	NICU-RDS	18-01-2022	NO COMPLAINT
65	25YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	28HRS	28HRS	6	5	MOTHERS SIDE	26-01-2022	NO COMPLAINT
66	22YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	24HRS	24HRS	6	3	MOTHERS SIDE	24-01-2022	NO COMPLAINT
67	28YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	30HRS	6	3	MOTHERS SIDE	29-01-2022	NO COMPLAINT
68	25YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	30HRS	28HRS	6	3	MOTHERS SIDE	31-01-2022	NO COMPLAINT
69	39YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 1OHRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	30SEC	6	4	MOTHERS SIDE	31-01-2022	NO COMPLAINT
70	23YRS	40	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	28HRS	24HRS	7	3	MOTHERS SIDE	04-02-2022	NO COMPLAINT
71	26YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	30HRS	28HRS	6	4	NICU-RDS	15-02-2022	NO COMPLAINT
72	26YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	8HRS	48HRS	48HRS	6	4	MOTHERS SIDE	28-02-2022	NO COMPLAINT
73	22YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 12HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	10HRS	24HRS	24HRS	7	4	NICU-RDS	01-03-2022	NO COMPLAINT
74	30YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	24HRS	24HRS	6	4	NICU-RDS	23-03-2022	NO COMPLAINT
75	27YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	6HRS	24HRS	28HRS	7	4	NICU-MSL	27-03-2022	NO COMPLAINT
76	30YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 10HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	8HRS	24HRS	28HRS	6	4	NICU-RDS	10-04-2022	NO COMPLAINT
77	23YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	7HRS	28HRS	24HRS	7	3	MOTHERS SIDE	11-04-2022	NO COMPLAINT
78	20YRS	39	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	6HRS	36HRS	48HRS	6	4	MOTHERS SIDE	05-04-2022	NO COMPLAINT
79	24YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 6HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	6HRS	24HRS	36HRS	6	4	MOTHERS SIDE	24-04-2022	NO COMPLAINT
80	26YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 7HRS LIQUIDS 5HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 2DOSES	6HRS	36HRS	48HRS	5	4	MOTHERS SIDE	28-04-2022	NO COMPLAINT
81	26YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 2DOSES	8HRS	48HRS	36HRS	7	4	MOTHERS SIDE	25-04-2022	NO COMPLAINT
82	33YRS	38	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	1MIN	INJ DYNAPAR 3DOSES	8HRS	24HRS	28HRS	7	3	MOTHERS SIDE	26-04-2022	NO COMPLAINT
83	22YRS	37	0	WRITTEN AND VERBAL COUNSELLING DO	SOLIDS 8HRS LIQUIDS 4HRS	NOT GIVEN	0	1HR BEFORE	NOT GIVEN	30SEC	INJ DYNAPAR 3DOSES	8HRS	24HRS	48HRS	6	3	MOTHERS SIDE	27-04-2022	NO COMPLAINT

S.NO	AGE	WEEKS	PRE OPERATIVE	PATIENT EDUCATION	NBM STATUS	CARBOHYDRATE LOADING	INTRA OPERATIVE	ANTIBIOTICS	POST OP NAUSEA	CORD CLAMPING	POST OPERATIVE	ANALGESIA	TIME INTAKE OF ORAL INTAKE FROM TIME OF SURGERY	MOBILISATION FROM TIME OF SURGERY	TIME INTERVAL OF REMOVAL OF CATHETER	PATIENT SATISFACTION SCORE	PATIENT PAIN SCORE	PERINATAL OUTCOM	DURATION OF STAY IN HOSP	FOLLOW UP
1	25yrs	38	0	Written and verbal counselling done	solids-7hrs Liquids-3hrs	GIVEN	0	before skin incision	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	5HRS	1O HRS	8HRS	8	0	MOTHERS SIDE	6DAYS	NO COMPLAINT
2	23YRS	38	0	WRitten and verbal counselling done	solids-7hrs Liquids-2hrs	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 2 DOSE	5HRS	12HRS	8HRS	7	0	NICU-OBSERVATION	4DAYS	NO COMPLAINT
3	24YRS	37	0	Written and verbal counselling done	SOLIDS-8HRS LIQUIDS 3HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	12HRS	7HRS	7	0	MOTHERS SIDE	6DAYS	NO COMPLAINT
4	28YRS	38	0	WRitten and verbal counselling done	solids-7hrs Liquids-2hrs	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	6HRS	10HRS	8HRS	7	0	MOTHERS SIDE	6DAYS	NO COMPLAINT
5	33YRS	38	0	Written and verbal counselling done	solids-7hrs Liquids-3hrs	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 2 DOSE	4HRS	1OHRS	8HRS	8	0	MOTHERS SIDE	5DAYS	NO COMPLAINT
6	29YRS	38	0	Written and verbal counselling done	solids-7hrs Liquids-3hrs	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1 MIN	0	INJ DOLO 2DOSES	6HRS	10HRS	7HRS	8	0	NICU-OBSERVATION	5DAYS	NO COMPLAINT
7	22YRS	38	0	Written and verbal counselling done	solids-7hrs Liquids-5hrs	REFUSED	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	12HRS	7HRS	8	0	MOTHERS SIDE	4DAYS	NO COMPLAINT
8	30YRS	39	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	5HRS	10HRS	6HRS	7	0	MOTHERS SIDE	4DAYS	NO COMPLAINT
9	25YRS	39	0	WRitten and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	5HS	10HRS	7HRS	8	0	MOTHERS SIDE	4DAYS	NO COMPLAINT
10	22YRS	40	0	WRITTEN AND verbal counselling done	solids-7hrs Liquids-4hrs	REFUSED	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	6HRS	8	0	NICU-OBSERVATION	4DAYS	NO COMPLAINT
11	24YRS	38	0	WRitten and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	4HRS	12HRS	7HRS	7	0	MOTHERS SIDE	4DAYS	NO COMPLAINT
12	23YRS	39	0	Written and verbal counselling done	solids-7hrs Liquids-2hrs	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	8	0	MOTHERS SIDE	4DAYS	NO COMPLAINT
13	25YRS	38	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	12HRS	7HRS	8	0	MOTHERS SIDE	3DAYS	NO COMPLAINT
14	27YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	7HRS	9	0	NICU-RDS	3DAYS	NO COMPLAINT
15	25YRS	37	0	Written and verbal counselling done	SOLIDS 10HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	4HRS	10HRS	8HRS	8	0	MOTHERS SIDE	6DAYS	NO COMPLAINT
16	31YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	6HRS	9	0	MOTHERS SIDE	4DAYS	NO COMPLAINT
17	20YRS	39	0	Written and verbal counselling done	SOLIDS 4HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	7HRS	8	0	NICU-OBSERVATION	4DAYS	NO COMPLAINT
18	25YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	8HRS	7HRS	8	0	MOTHERS SIDE	3DAYS	NO COMPLAINT
19	24YRS	38	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	7HRS	8HRS	9	0	MOTHERS SIDE	3DAYS	NO COMPLAINT
20	26YRS	39	0	Written and verbal counselling done	SOLIDS 4HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	4HRS	8HRS	7HRS	9	0	NICU-RDS	4DAYS	NO COMPLAINT
21	35YRS	38	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 2 DOSE	4HRS	8HRS	7HRS	9	0	MOTHERS SIDE	3DAYS	NO COMPLAINT
22	36YRS	38	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	7HRS	9	3	MOTHERS SIDE	3DAYS	NO COMPLAINT
23	28YRS	38	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	7HRS	9	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
24	35YRS	37	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	7HRS	9	2	MOTHERS SIDE	3DAYS	NO COMPLAINT
25	35YRS	37	0	Written and verbal counselling done	SOLIDS 7HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	7HRS	9	3	MOTHERS SIDE	3DAYS	NO COMPLAINT
26	35YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	6HRS	10HRS	8HRS	9	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
27	35YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	11HRS	10HRS	8	2	NICU-RDS	5DAYS	NO COMPLAINT
28	29YRS	38	0	Written and verbal counselling done	SOLIDS 7HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	8HRS	8	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
29	25YRS	37	0	Written and verbal counselling done	SOLIDS 7HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	10HRS	9	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
30	25YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 5HRS	REFUSED	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	10HRS	12HRS	8	2	NICU-MAS	6DAYS	NO COMPLAINT
31	24YRS	38	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	10HRS	8HRS	7	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
32	23YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	8HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
33	22YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	12HRS	10HRS	7	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
34	23YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	12HRS	8HRS	8	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
35	26YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	7HRS	8	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
36	27YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	6HRS	12HRS	6HRS	7	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
37	23YRS	37	0	Written and verbal counselling done	SOLIDS 10HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	12HRS	6HRS	8	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
38	38YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	12HRS	10HRS	7	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
39	30YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	7	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
40	22YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	12HRS	10HRS	7	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
41	22YRS	39	0	Written and verbal counselling done	SOLIDS 10HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	10HRS	8HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
42	23YRS	37	0	Written and verbal counselling done	SOLIDS 10HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	12HRS	6	3	MOTHERS SIDE	4DAYS	NO COMPLAINT

43	22YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	5HRS	10HRS	8HRS	7	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
44	23YRS	40	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	7	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
45	23YRS	38	0	Written and verbal counselling done	SOLIDS-8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	7	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
46	29YRS	38	0	Written and verbal counselling done	SOLIDS 10HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	IINJ.ONDANSETRON 4MG,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	8HRS	14HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
47	36YRS	37	0	Written and verbal counselling done	SOLIDS 10HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	8	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
48	30YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2 HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	8HRS	8HRS	7	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
49	24YRS	38	0	Written and verbal counselling done	SOLIDS 10HRS LIQUIDS 4HRS	REFUSED	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	2HRS	12HRS	10HRS	8	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
50	22YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	8HRS	6HRS	7	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
51	20YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	4HRS	10HRS	12HRS	8	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
52	32YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	8HRS	10HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
53	23YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	8HRS	7	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
54	26YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	8HRS	8HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
55	25YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	8HRS	7	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
56	25YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	10HRS	10HRS	6	3	MOTHERS SIDE	3DAYS	NO COMPLAINT
57	26YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	10HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
58	23YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	8HRS	6HRS	8	2		5DAYS	NO COMPLAINT
59	26YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	7	3	NICU-OBSERVATION	4DAYS	NO COMPLAINT
60	25YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	10HRS	8	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
61	26YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
62	26YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	4HRS	10HRS	10HRS	8	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
63	33YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	6HRS	9	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
64	28YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	10HRS	9	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
65	34YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	12HRS	10HRS	9	2	MOTHERS SIDE	3DAYS	NO COMPLAINT
66	21YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	9	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
67	26YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	8HRS	8	3	MOTHERS SIDE	3DAYS	NO COMPLAINT
68	20YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	10HRS	8	3	MOTHERS SIDE	4DAYS	NO COMPLAINT
69	32YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	6HRS	9	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
70	25YRS	40	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	9	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
71	25YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	6HRS	9	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
72	30YRS	36	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	10HRS	8	2	MOTHERS SIDE	3DAYS	NO COMPLAINT
73	33YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	7	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
74	27YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	8	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
75	26YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	8HRS	12HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
76	28YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	4HRS	8HRS	12HRS	8	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
77	24YRS	37	0	Written and verbal counselling done	SOILIDS 7HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	8HRS	8HRS	9	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
78	23YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	10HRS	10HRS	9	2	MOTHERS SIDE	6DAYS	NO COMPLAINT
79	26YRS	37	0	Written and verbal counselling done	SOLIDS 8 HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES , INJ DYNAPAR AQ 1 DOSE	5HRS	8HRS	10HRS	7	2	MOTHERS SIDE	5DAYS	NO COMPLAINT

80	22YRS	37	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	6HRS	8	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
81	27YRS	38	0	Written and verbal counselling done	SOLIDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	8HRS	8HRS	8	3	MOTHERS SIDE	5DAYS	NO COMPLAINT
82	27YRS	39	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	8HRS	10HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
83	29YRS	39	0	Written and verbal counselling done	SOLIDS 7HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	10HRS	8HRS	8	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
84	23YRS	38	0	Written and verbal counselling done	SOLIDS 8HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	6HRS	8HRS	9	2	MOTHERS SIDE	6DAYS	NO COMPLAINT
85	23YRS	38	0	Written and verbal counselling done	SOILDS 6HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 3DOSES	5HRS	12HRS	6HRS	8	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
86	24YRS	37	0	Written and verbal counselling done	SOLIDS 7HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	12HRS	6HRS	8	2	MOTHERS SIDE	5DAYS	NO COMPLAINT
87	29YRS	37	0	Written and verbal counselling done	SOILDS 10HRS LIQUIDS 3 HRS	REFUSED	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	5HRS	6HRS	8HRS	8	2	MOTHERS SIDE	3DAYS	NO COMPLAINT
88	29YRS	39	0	Written and verbal counselling done	SOLIDS 7HRS LIQUIDS 4HRS	REFUSED	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	8HRS	10HRS	8	2	MOTHERS SIDE	4DAYS	NO COMPLAINT
89	24YRS	36	0	Written and verbal counselling done	SOLIDS 7HRS LIQUIDS 2HRS	GIVEN	0	BEFORE SKIN INCISIO	INJ.ONDANSETRON 4MG ,INJ DEXAMET	1MIN	0	INJ DOLO 2DOSES	6HRS	8HRS	6HRS	8	2	MOTHERS SIDE	5DAYS	NO COMPLAINT

INSTITUTIONAL ETHICAL COMITEE CLEARANCE



B.L.D.E. (DEEMED TO BE UNIVERSITY) IEC/NO-09/2021 Date-22/01/2021

(Declared vide notification No. F.9-37/2007-U.3 (A) Dated. 29-2-2008 of the MHRD, Government of India under Section 3 of the UGC Act, 1956)

The Constituent College

SHRI. B. M. PATIL MEDICAL COLLEGE, HOSPITAL AND RESEARCH CENTRE

INSTITUTIONAL ETHICAL CLEARANCE CERTIFICATE

The Institutional ethical committee of this college met on 11-01-2021 at 11-00 am to scrutinize the synopsis of Postgraduate students of this college from Ethical Clearance point of view. After scrutiny the following original/corrected and revised version synopsis of the Thesis has been accorded Ethical Clearance

Title: A comparative study between enhanced recovery after surgery (ERAS) protocol and conventional protocols in elective caesarean deliveries

Name of PG student: Dr Nimmala Snigdha
Department of Obst/Gynaec

Name of Guide/Co-investigator: Dr Shobha Shiragur, Associate Professor of Obst/Gynaec

DR .S.V.PATIL
CHAIRMAN, IEC
Institutional Ethical Committee
B L D E (Deemed to be University)
Shri B.M. Patil Medical College,
VIJAYAPUR (Karnataka)

Following documents were placed before Ethical Committee for Scrutinization:

1. Copy of Synopsis / Research project
2. Copy of informed consent form
3. Any other relevant documents.

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20BMOBG009-SNIGDHA-A COMPARATIVE STUDY BETWEEN ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOLS AND CONVENTIONAL PROTOCOLS IN ELECTIVE CAESAREAN DELIVERIES

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