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To compare the effect of programmed labour with epidural analgesia on blood loss

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Abstract

Background: To compare the effect of programmed labour with epidural analgesia on blood loss

Methods: In our study, 80 parturient females fulfilling the inclusion criteria were taken. They were divided into two groups of 40 patients each by block randomization method to study and compare the effect of programmed labour with epidural analgesia on maternal and foetal outcome for a period of one year. The group 1 was administered programmed labour analgesia which included injection Pentazocine 6 mg IV +Inj Diazepam 2 mg I.V +Inj. Tramadol 1-1.5mg/kg I.M thereafter a single dose of injection Drotaverine 40 mg I.V. whereas group 2 received epidural analgesia

Results: The mean blood loss in group 1was112ml while in group 2 it was 98 ml No retained placenta seen in both groups**.** No any other complications seen in both groups

Conclusion: Neonatal outcome were comparable in both groups.

Keywords: Blood Loss, Labour, LSCS

Introduction

The use of epidural analgesia has steadily increased in our country over the past few years .with more expertise our anaesthetists now judge the different technique of anaesthesia available to them for a particular patient .A number of factors may be involved in lower acceptance of this modality by our population, including social customs ,lack of public awareness and lack of organized maternity services. Epidural analgesia has proved to be beneficial and has contributed significantly to pain relief and improved obstetric outcomes. However in India , wherein in majority of women are cared for in small community hospitals and private maternity homes, facilities for providing epidural analgesia continues to remain a distant dream . [1]

Epidural analgesia is the most effective and least depressant method of intrapartum pain relief in current practice. Convenience of administration of programmed labor can be an alternative in rural setups where trained medical personnel may not be available most of the times.One must accept the fact that service of trained anesthesiologist is not universally available. Hence the adoption of analgesia protocol of combining analgesic and antispasmodic drugs in smaller optional synergistic doses which can be easily followed by attending obstetrician has much to recommend for under

acceptance by the profession and it can prove to be an asset in providing substantial pain relief.[2]

Material and Methods

Type of Study: This randomized Interventional clinical trial was conducted in department of Anaesthesia at Kamla Nehru State Hospital for Mother and Child, Indira Gandhi medical College Shimla in collaboration with Department of Anaesthesia.

Inclusion Criteria

- Age 18- 40 years
- Pre pregnancy BMI- 18.5 to 24.9 Kg/m2
- Singleton pregnancy with vertex presentation with spontaneous or induced labour after 34 weeks.
- Cervix dilatation 4-6cm and effacement 20-50 percent.
- Presence of regular uterine contraction.
- Reactive NST.
- Pre rupture of membrane less than 6 hours
- Pre-eclampsia with non severe features
- Clear liquor after Artificial Rupture Of Membrane

Exclusion criteria

- Malpresentation
- Cephalopelvic disproportion
- Preterm labour less than 34 weeks
- Intrauterine death
- Previous lower segment caesarean section and placenta praevia
- Medical Disorders complicating pregnancy excluding preeclampsia with non-severe feature
- Foetal compromise before epidural analgesia
- Previous back surgery, spinal deformity
- Bleeding disorders
- History of psychiatric disorders, drug allergy.

In our study, 80 parturient females fulfilling the inclusion criteria were taken. They were divided into two groups of 40 patient each by block randomization method to study and compare the effect of programmed labour with epidural analgesia on maternal and foetal outcome for a period of one year. The group 1 was administered programmed labour analgesia which included injection Pentazocine 6 mg IV +Inj Diazepam 2 mg I.V +Inj. Tramadol 1-1.5mg/kg I.M thereafter a single dose of injection Drotaverine 40 mg I.V. whereas group 2 received epidural analgesia

Study Drug : 15 ml of ropivacaine 0.2% with 2 µg/ml fentanyl (2 µg /ml of fentanyl will be taken by using six parts from a tuberculin syringe graduated in markings to divide 1 ml (50 mcg/ml) into 10 parts and added to 15 ml of ropivacaine to achieve a final concentration of fentanyl i.e. 2 mcg/ml).

The time of injection will be noted and patient will be kept in supine position for 10 minutes .Effect of Epidural analgesia will be recorded at 5 minutes, 15 minutes and then at every 15 minutes for 1 hour and every 30minutes till VAS Score becomes less than 3, this will be noted as onset of analgesia and ambulation grading will be done.

Rescue analgesia will be given in the form of injection ketamine 0.25% -0.5mg/kg will be given intravenously in group one only in selected cases at cervical dilation of 7-8 cm and patient complaining of pain, subsequent doses will be half of the first dose and interval between two doses will be 30 minutes required.

Data Analysis

Data collected from patient's records and from the irimaging will be transferred into MS Excel sheet for further processing and analysis. Data will be further analysed using stastical software. Epiinfo version 4 and SPSS version 20. Qualitative variables will be expressed

in term of frequencies, proportion and 95% confidence interval while quantitative variables will be expressed as mean and standard deviation. In order to compare results between two study groups appropriate parametric or non parametric test of statistical significance will be used. Probability value (p-value) less than 0.05 will be considered statistically.

Results

Table 1: Blood loss

Events in third stage of labour	Group 1	Group 2	P value
Duration of third stage of labour	5.89min	5.7min	0.216
Blood loss	112ml	98ml	
Retained placenta	Nil	Nil	

The mean blood loss in group 1was112ml while in group 2 it was 98 ml The mean blood loss in group 1was112ml while in group 2 it was 98 ml No retained placenta seen in both groups**.** No any other complications seen in both groups

Discussion

The mean duration of third stage of labour in our study is 5.89 min in group 1 and 5.7 min group 2. This difference is statistically insignificant using student t test (>0.005).

The duration of third stage of labour similar results seen in study conducted by Shahida et al (2011), Veerandrakumar et al (2016), Rehana et al (2018). Similarly in group 2 , parturients received epidural analgesia had Less blood loss and results was compared to study conducted by Angeliki et al (2016), Vidya et al (2015). In our study the parturient females in group 1 - 112ml had more blood loss compared to group 2 (92ml). Using student t test , the difference was found to be statistically significant.

Conclusion

Blood loss were comparable in both groups

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