ISSN- O: 2458 - 868X, ISSN–P: 2458 – 8687
National Library of Medicine - ID: 101731606

International Journal of Medical Science and Innovative Research (IJMSIR)
IJMSIR : A Medical Publication Hub
Available Online at: www.ijmsir.com
Volume – 7, Issue – 3, May – 2022 , Page No. : 04 - 07

To compare the effect of programmed labour with epidural analgesia on neonatal outcome

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Citation this Article: Dr Jyotika Bala, Dr Ankita Jamwal, "To compare the effect of programmed labour with epidural analgesia on neonatal outcome", IJMSIR- May - 2022, Vol – 7, Issue - 3, P. No. 04 – 07.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: To compare the effect of programmed labour with epidural analgesia on neonatal outcome

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 birth weight of the babies in the group 1 and in the group 2 was 2.7 and 2.6 respectively. Using t test, there was no statistically difference between them. There was no neonatal mortality in group 1 while in group 2 , one case of neonatal mortality due to sepsis . Neonatal outcome were comparable in both the groups. There was no statistically significant difference between the group 1 and group 2.

Conclusion: Neonatal outcome were comparable in both groups.

Keywords: Neonatal outcome, labour, birth weight.

Introduction

Labour is an intense and painful experience for most women, many of whom find it worse than they expected. For the woman having her first baby there is often additional fear and anxiety about the unknown. The agony and stress a woman suffers is beyond description. Attempt to alleviate this misery has led to the development of concept of labour analgesia.[1]

In absence of medical contraindication, maternal request is sufficient medical indication for pain relief during labour.

It is well established that excruciating pain of labour also causes autonomic overstimulation in the mother thereby causing disturbances in circulation and respiration, and also predisposes to dysfunctional labour compromising fetal oxygenation. Prolonged labour predisposes a woman to infection, dehydration, acidosis and exhaustion as well as foetal distress, increased morbidity of the baby and may produce long term emotional disturbances which may negatively influence the mothers relationship

with her baby during first few crucial days. Freedom of pain improves both maternal and fetal outcome.[1-3]

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 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

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: Neonatal outcome

Variable	Group 1	Group 2	p-value
APGAR at 1 Mint	7.7±0.62	8.05±0.64	0.31
APGAR at 5 Mint	8.8±0.38	8.09±0.16	0.62
Birth weight in kg	2.70±0.52	2.74±0.53	0.59
NICU Admission	2/40	2/40	0.99

Mean APGAR of the babies at 1 min and 5 min were 7.7 and 8.8 in Group 1 and 8 and 9 in group 2 respectively which is comparable in both group. Majority of the babies in both in both the groups were in the range of 2 to 3 kg. The mean weight of the babies in the group 1 was 2.71kg and in the group 2 was 2.74 kg which was comparable.

Discussion

The mean birth weight of the babies in the group 1 and in the group 2 was 2.7 and 2.6 respectively. Using t test, there was no statistically difference between them. Simliar findings observed in study conducted by Shahida M and Rafia A (2011)- reported the mean birth weight of the neonate 2.85 kg and 2.84kg in the control group.There was no neonatal mortality in group 1 while in group 2 , one case of neonatal mortality due to sepsis . Neonatal outcome were comparable in both the groups. There was no statistically significant difference between the group 1 and group 2.

All the babies had APGAR Score of 7-9 at one minutes expect one baby in group 1 at 1 minute but 9 at 5 minutes . Mean APGAR score of the babies at one and five minutes in both the groups were comparable.

In their study, conducted by Daftary et al (200) reported APGAR score of 8-10 in all neonates at one and five minutes . Our study is consistent with his study. Similar observations seen in study conducted by meena et al ,shahida et al 2011,Angeliki et al (2016)

Conclusion

Neonatal outcome were comparable in both groups

References

1. Chauhan R,Gupta R,A Clinical study of programmed labor and its outcome.J. Obstet Gynecol And family welfare 2003:5;8-9
2. Meena jyoti,Singhal Prabha ,C Devika. To evaluate the various effects of programmed labor protocol on normal nulliparous and their neonate. J Obstet Gynecol India 2006.56;53-55
3. Desai P,Patel P,Gupta A,et al.Epidural analgesia in labor J Obstet Gynaecol India.2006;56(5):417-22
4. Ahmed F, Nanakbhakat, Shirish daftary. Programmed labour for optimizing labour and delivery - a multicentric study. Indian journal of obstetrics and Gynaecology Research 2015;2(3)169-17
5. Vidya A T, Vibhavaree Dandavate. Outcome of epidural analgesia in primigravidae. Indian journal of Medical Research and Pharmaceutical Sciences. 2015,2(8)2349-534

6. Angeliki A, Papoutsis. The effect of Epidural Analgesia on the delivery outcome of induced labour : A Retrospective case series. Hindawi Publishing Corporation Obstetrics and Gynecology International. 2016,10.1155/5740534
7. Rehana N,Agarwal S.A Clinical Study on Labour Analgesia in Full Term Primigavida Patients.International Archives of BioMedical and Clinical Research.20 18;4:1