

# **EFFECT OF PETHIDINE DURING LABOUR PROCESS: MOTHERS' PERSPECTIVE**

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## **INTRODUCTION**

Labour is one of the most painful conditions and is considered to be one of the most intense and stressful experiences which is a result of a complex and subjective interaction of multiple physiological and psychosocial factors (Cooper & Fraser, 2003; Maria, 2009). In the modern era various pharmacological and non-pharmacological methods are practiced for labour analgesia (Palmer, 2000; Kothari & Bindal, 2011). Pethidine is a widely used opioid drug for pain relief in labour (Gyton & Hall, 2000).

According to Sosa (2004) pethidine should not be used because of the absence of any benefits to patients with difficult labour. Furthermore, Ekblom, Ekman and Hjelm (2005) have revealed that labour pain is not sensitive to systematically administered morphine or pethidine and only cause heavy sedation. There are considerable doubts about the effectiveness of pethidine and concerns about its potential maternal, fetal and neonatal side-effects (Norris *et al*, 1994).

Many research studies reveal that pethidine has adverse effects on the mother as well as the baby. As a developing country, in Sri Lanka, there are not enough research studies done on the above. Therefore the purpose of this study is to study the effects of pethidine during the labour process from the mothers' perspective. The specific objectives are, to study the effect of pethidine on the mother related to pain, effect of pethidine on the mother related to side effects and effect on babies.

## **METHODOLOGY**

The quantitative approach and descriptive design was used in this study. The population of this study was all postnatal mothers who have been given Pethidine to manage labour pain. Purposive sampling was used to choose the sample and the sample was 149 mothers in postnatal wards in the Teaching Hospital, Mahamodara. A self-administered questionnaire was used to collect the data. The questionnaire consisted of four main categories including demography, mothers experience related to pain, adverse effects related to pethidine and impact of pethidine on the baby. The reliability and validity of the questionnaire was confirmed by a pretest. Before administering the questionnaire ethical approval was obtained from the ethical committee of the Faculty of Medicine, Karapitiya. In addition, the researcher got informed consent from the participants. Statistical data analysis was done by using SPSS 16 statistical software.

## **RESULTS AND DISCUSSION**

According to the findings, a majority of mothers (73.82%) reported that there was only a slight reduction of pain after administration of pethidine. Among that 42.27% of mothers had received pethidine in the latent phase and 31.55% had received it during the active phase. Only 4.02% of mothers reported that there was total reduction of pain while 20.8% of mothers reported no reduction of pain at all. Among mothers who reported that there was total

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reduction of pain, 2.68% had received pethidine during the latent phase and 1.34% had received in the active phase. These findings show that pethidine is more effective in pain management when it is given in latent phase (Table 1). On the other hand these findings show that there is no clear effect of Pethidine on pain reduction according to the mothers' perspective which is compatible with the majority of research findings (Pang & Sullivan, 2008; Ekblom, Ekman & Hjelm, 2005).

**Table 1: Effect of Pethidine on mother related to pain**

| Response                 | Percentage of mothers % |              |
|--------------------------|-------------------------|--------------|
|                          | Latent phase            | Active phase |
| No reduction of pain     | 8.72                    | 12.08        |
| Slight reduction of pain | 42.27                   | 31.55        |
| Total reduction of pain  | 2.68                    | 1.34         |
| Unresponsive             | 0.67                    | 0.67         |

Latent phase: cervical os dilatation 1-3cm Active phase: cervical os dilatation 4-7cm

When considering adverse effects most of the mothers (52.34%) reported drowsiness while 16% reported dizziness and 8.72% reported nausea and vomiting. A considerable number of mothers (13.41%) experienced two or more side effects while only 9.36% of mothers experienced no adverse effects (Table 2). This evidence shows that a majority of mothers experience at least one adverse effect of pethidine whether they have received pethidine in latent or active phases as noted by Sosa (2004).

**Table 2: Effect of pethidine on mother related to adverse effects**

| Side Effects             | Percentage of mothers % |              |
|--------------------------|-------------------------|--------------|
|                          | Latent phase            | Active phase |
| Drowsiness               | 22.14                   | 30.2         |
| Nausea and vomiting      | 6.71                    | 2.01         |
| Dizziness                | 11.4                    | 4.69         |
| Two or more side effects | 10.06                   | 3.35         |
| None                     | 4.02                    | 5.36         |

**Table 3: Effect on babies to pethidine**

| Characteristics         | Total | Percentage of affected babies % |              |
|-------------------------|-------|---------------------------------|--------------|
|                         |       | Latent phase                    | Active phase |
| Not crying              | 1.3   | 34.2                            | 65.8         |
| Sucking difficulties    | 10.7  | 46.7                            | 43.3         |
| Difficulty in breathing | 7.4   | 50                              | 50           |
| Administered Oxygen     | 6     | 44.4                            | 55.6         |
| Administered Naloxone   | 22.1  | 21.2                            | 78.8         |

Pethidine influenced the baby in several ways like breathing difficulties and sucking difficulties (Maria, 2009). This study also has shown a considerable amount of babies (7.4%) with breathing difficulties. It may be due to pethidine. Apart from that, 10.7% of babies had sucking difficulties. Oxygen was given to 6 % of babies with severe breathing difficulties and 22.1% of babies were given Naloxone as an antidote for Naloxone. Percentages of the babies with problems from the mothers who have received pethidine at the active phase (cervical os

dilatation 1-3 cm) were above 50 % for all the variables except sucking difficulty. So, there may be an association between the impact on the baby and the phase in which pethidine is given.

## **CONCLUSIONS/RECOMMENDATIONS**

According to this study there is no significant impact of pethidine in terms of pain management while it has been proven to have adverse impacts on the mothers as well as the babies. Therefore the use of pethidine is questionable. Furthermore, it was evident that pethidine is more effective in pain management if it is given in latent phase. Apart from that, it was evident that there are considerable side effects that adversely affect the labour process. Further, the study suggested that if it is needed to give pethidine, it should be administered at the latent phase (cervical os dilatation 3-7 cm) of the labor process in order to minimize or reduce adverse effects on both mothers and the babies. However, all the above suggestions need to be revisited with future studies containing a larger sample representing mothers from all over the country.

## **REFERENCES**

- Bricker, L., & Levender, T. (2002, May). Parenteral opioids for labour pain relief. *American Journal of Obstetrics and Gynecology*, 186(5), 94-109.
- Douglas, M. J., & Levinson, G. (2001). Systemic medication for labor and delivery. *Anesthesia for Obstetrics*, 5 (1), 105-121.
- Ekblow, A., Ekman, G., & Hjelm, A. (2005). Lack of analgesic effect of systematically administered morphine or pethidine on labour pain. *International Journal of Obstetrics & Gynaecology*, 103 (10), 968-972.
- Fraser, D.M., & Cooper, M.A. (2003). *Text book for Midwifery* (10th ed). U.K: Churchill Livingstone.
- Maria, L. (2009). Labour pain and pharmacological pain relief practice points. *Health science journal*, 3(4), 197-201.
- Kothari, D., Bindal, J. (2011). Impact of obstetric analgesia (regional vs parenteral) on progress and outcome of labour. *Journal of obstetric analgesia impact on progress and outcome of labour*, 18(1), 34-40.
- McCreary, B.H., Wright, M.E., & Black, M.T. (2000). Psychological factors influencing personal control in pain. *International Journal of Nursing Studies*, (37,) 493-503.
- Palmer, J. (2000). Pethidine for Pain Relief in Labour. *AMJOG*.
- Pang, D., Sullivan, G.O. (2008). Analgesia and anaesthesia in labour. *Obstetrics and gynecology reproductive medicine*, (18).
- Sosa, C. G. (2004). Meperidine for dystocia during the first stage of labor. *American Journal of Obstetrics and Gynecology* (191,) 1212-18.

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