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MIDWIFE APPROACH TO LABOR EPIDURAL ANALGESIA

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ABSTRACT:

Author present this paper to create awareness and knowledge among Midwife with the intention to familiarize the nursing role in regard to Labor Epidural Analgesia. Author personally endured Epidural Analgesia during her labor and delivery process and experienced 100% satisfaction in terms of pain relief. Pain management was well accomplished throughout the labor and delivery process. Entire labor journey was so positive with amazing memories with the expertise of the fabulous Anesthetist and Midwives.

This is one of the effective pain relief method in labor and delivery. Midwife approach and role of the midwife/nurse play huge role in labor epidural analgesia. Nursing labor patient with epidural is quite interesting and challenging role that requires competent midwife, frequent clinical monitoring, reassessment and reporting.

Key Words: *Analgesia, Epidural, Labor, Midwife, Nursing care.*

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INTRODUCTION:

Labor is the process where the women's body prepare for the birth of the baby also called childbirth. During childbirth process the body experience so many changes both physically and emotionally. Pain of Labor is unique and individual based experience. Labor pain can be managed by both pharmacological and non-pharmacological methods. Epidural is one of the effective pharmacological pain relief and advanced multimodel pain approach.

Thin epidural catheter is placed in the lumbar epidural space by trained and privileged personnel. Catheter will be in situ until placenta is removed and perineum is repaired. Top up the pain medication as needed to achieve complete pain relief. Epidural anesthesia best achieved by either local anesthesia and or combined opioids pain medication. Mother may still urge to pushing, but sensation is reduced.

Nursing Care During Labor Epidural Analgesia:

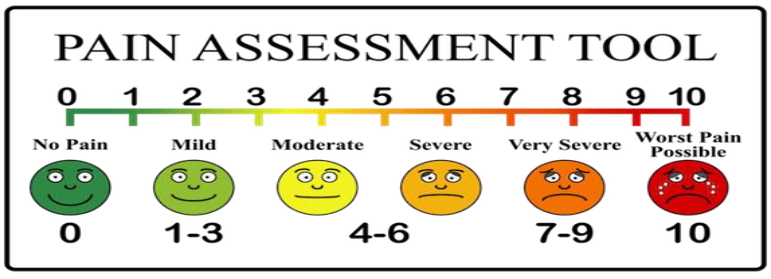
- Epidural Site assessment
- Pain assessment
- Vital signs monitoring
- Continuous CTG Monitoring
- Dermatome assessment
- Motor assessment
- Sedation assessment
- Side effects assessment
- Documentation
- Removal of Epidural Catheter

Epidural Site Assessment:

Assess the epidural catheter site for any redness, tenderness, hematoma, abscess and leaking over the dressing. If transparent dressing, catheter mark to be checked to ensure no migration of epidural catheter. If the dressing is not intact dressing needs to be changed immediately with aseptic technique by the competent person.

Pain Assessment:

It is essential to use the institutional approved pain scale to assess the pain, Author showed Wong Baker or Numerical pain scale to assess the pain score of the patient.



Procedure:

- Explain the pain scale and faces to the patient.
- Ask the patient to verbalize the pain score as pain is subjective by using the pain assessment tool.
- If pain score is high and not controlled, increase the epidural dose /bolus as needed.

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Vital Sign Monitoring:

- It is crucial to monitor vital signs on regular basis as it reflects the basic body function including Heart rate, Respiratory Rate, Temperature, Oxygen saturation and Blood pressure. All the parameters are critical, however Respiratory rate and Blood pressure are needs to be concerned more and more as epidural anesthesia are typically combined with local anesthesia and or opioid drugs.

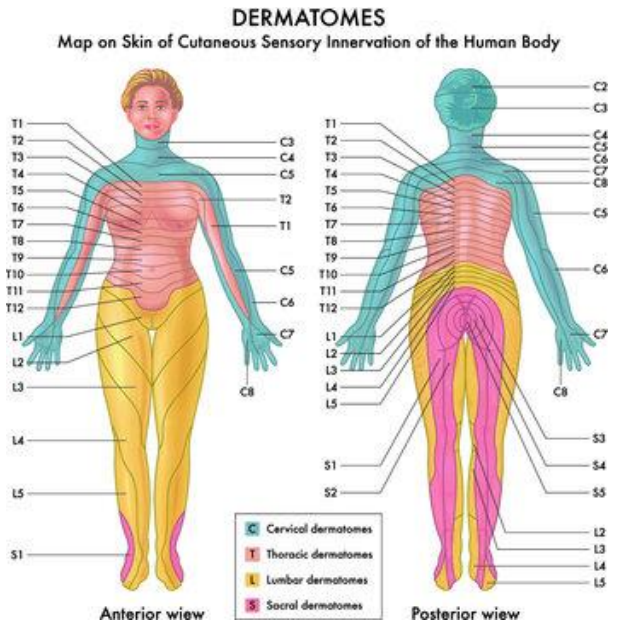
Intrapartum Fetal Surveillance and CTG Monitoring:

- Recommended performing continuous fetal monitoring during epidural catheter insertion and throughout the care and maintenance.

Dermatome assessment:

The part of the skin supplied by single specific nerve root is called Dermatome. Pain and temperature nerve routes are typically affected by local anesthesia agents. Changes in the temperature perception or sensation indicate that where the epidural is working. Usually sensory block will be assessed by cold objects which is Ice.

Key Dermatomes:



It's not potential to recall all the above dermatomes when doing the dermatome assessment. In order to perform the labor epidural dermatome test smoothly and competently author recommend to remember the key dermatomes which is listed as below:

Key Dermatomes	Landmarks
T4	Nipple
T6	Xiphoid Process
T8	Upper abdomen
T10	Umbilicus
L1	Groin or hip area
L2	In front of the thigh
L3	In front of the knee

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Procedure:

- Explain the procedure to the patient and family.
- Wrap an ice cube in tissue or plastic cover or paper towel.
- Place ice pack on area sound away from the possible dermatome block e. g. face / forearm and ask how cold she or he feels?

In order to identify whether the patient can distinguish cold sensation or not, if the patient is not recognizing cold sensation which means not fit for dermatome test that should be documented and reported to the Physician.

- Apply the ice to an area expected to be numbness and ask if it feels the same cold or no cold or less cold
- **e.g.,** as cold as your face /forehead or differently?
- Apply the ice above or below this area until to determine the upper and lower dermatomes blocked.
- Assess side to side to see if the block is unilateral or bilateral.

If dermatome block on T4 level:

- Stop the epidural.
- Reassure the patient.
- Check vital signs.
- Administer oxygen as needed.
- Contact the anesthesia or pain management team.

If dermatome block on T6 Level:

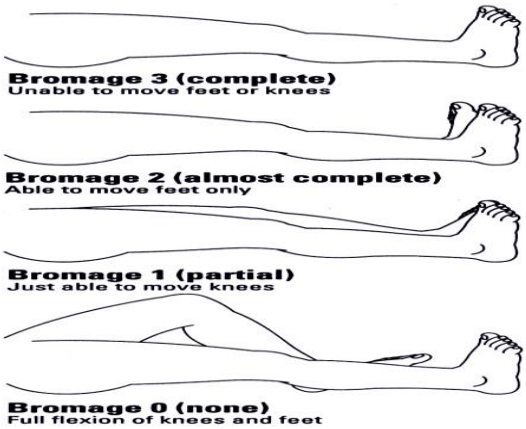
- Check the vital signs.
- Contact the anesthesia or pain management team.

If unilateral block:

- Ask the patient to change the position to the unaffected side.
- Reassess the patient after one hour of repositioning.

Motor Assessment:

It is very significant to assess the motor function inorder to know whether the patient is allowed for ambulation. Possible to use the institutional approved motor assessment scale, author showed Bromage scale to assess the motor function while the patient is on labor epidural.



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Procedure:

- Explain the procedure to the patient and family.
- Ask the patient to flex the knee and rotate the feet.
- Perform bilaterally.
- Score it accordingly based on the scale that used for assessment as visualized above.

If Bromage score 3:

- Stop the epidural.
- Do not ambulate the patient
- Notify to the anesthesia or pain management team.

Sedation Assessment:

Assess the patient sedation level with institutional approved sedation scale. Author showed the Ramsay Sedation Scale in order to assess the sedation when the patient is on Epidural infusion.

Score	Response
1	Anxious or restless or both
2	Cooperative, orientated and tranquil
3	Responding to commands
4	Brisk response to stimulus
5	Sluggish response to stimulus
6	No response to stimulus

Procedure:

- Explain the procedure to the patient and family.
- Assess the patient response and score it as pictured above.

If the sedation score is 5 or above:

Follow the mnemonics **"SOCA"**

S: Stop the Epidural infusion.

O: Oxygen administration.

C: Contact Anesthetist or Pain management team.

A: Administer the opioid antidote: naloxone as per institutional protocol.

Assessment of Side effects:

Epidural are usually safe, but some time side effects and complication will be occurred. Common local anesthesia side effects are hypotension, nausea and vomiting, pruritus and respiratory depression if opioid are combined.

Management of Side effects and complication:

1. Hypotension:

- Elevate the patient Leg.
- Intravenous Fluid bolus or opened fully.
- Administer anti- hypotensive agent as per protocol.
- Notify the anesthesia or pain management team.

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2. Respiratory depression:
Respiratory Rate <10/min ≥ 8/min:
Follow the mnemonics "SOC"
S - Stop the Epidural Infusion.
O - Oxygen administration.
C - Contact the pain management or anesthesia team as per Institutional Protocol.
Respiratory Rate < 8 /min:
Follow the mnemonics "SOCA"
S - Stop the epidural infusion.
O - Oxygen administration.
C - Contact the pain management or anesthesia team as per Institutional Protocol.
A- Administer the antidote as per protocol.
3. Nausea and Vomiting:

- Assess the severity of nausea vomiting.
- Administer antiemetic medication as per protocol.

4. Pruritis:

- Assess the severity of nausea vomiting.
- Administer antihistamine medication as per protocol.

Complications:
Headache:
Conservative treatment such as rest, hydration and analgesia are required, rarely blood patch is required.
Back pain:

- Usually patient complaints at insertion site.
- Urgent investigation needed for moderate to severe back pain.

Hematoma:

- Very rare and will require urgent investigation.

Epidural abscess:

- Very rare and require urgent investigation.

Local Anesthesia toxicity:

- Such as metallic taste, numbness, blurred vision, tremor and sudden loss of consciousness.

Clinical Observation and Documentation:

- Monitoring of vital signs will be done every 3 - 5 min for the first 15 min after initial placement of epidural catheter.
- Clinical observation and monitoring will be done on 30 minutes to hourly basis including vital signs, pain assessment, dermatome assessment, motor assessment, sedation assessment and side effect assessment as per protocol.
- Document the findings in the patient medical record.

Removal of Epidural Catheter:
Removal of the Epidural catheter to be performed after delivery of the placenta and if episiotomy and perineal tear is sutured. It is performed by using a septic technique by the competent person.

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Procedure:

- Explain the procedure to the patient and family.
- Place the patient either siting up with slightly bending forward or side lying position. Preferably, place patient in the same position that used during epidural catheter insertion.
- Removal of the epidural catheter 1 cm at a time via gently and smoothly by the competent Midwife/Nurse. If resistance felt, contact the pain management or anesthesia team as per institutional protocol.
- Ensure the catheter tip is intact before disposal of the catheter and discard it in the medical waste.
- Document the level of the catheter was inserted at skin level in cm.

CONCLUSION:

Labor epidural is very effective and successful. Currently, patient and family are voluntarily requesting for epidural analgesia on labor and the satisfaction rates are remarkable. Handling patient in labor suit with epidural is quit challenging and required to have certain epidural nursing skills, however midwives to be knowledgeable, skillful and competent in terms of Labor Epidural Analgesia.

Author, recommend that midwives or nurses required to attend Comprehensive Labor Epidural Analgesia: Nursing Perspective training or courses or workshops to attain knowledge. Skills to be validated by the expertise as per the institutional protocol. Competent Midwife/Nurse should handle the patient with epidural by utilizing team approach and frequent clinical monitoring inorder to ensure excellence in patient care without compromising patient safety.

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