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## Review Article

### CAM APPROACH ON LABOUR PAIN CONTROL – A MIDWIFE ROLE

**Rajaveni P, Annie Annal M\* and Renuka K**

Department of Obstetrics and Gynecology, Kasturba Gandhi Nursing College,  
Sri Balaji Vidyapeeth, Puducherry, India

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#### ABSTRACT

Pain associated with labour has been described as one of the most intense forms of pain that can be experienced by woman. According to WHO, 80% of health care in developing countries are comprised of indigenous traditional health practices rather than western biomedicine. Beside conventional approaches, there are many complementary and alternative methods have been reported to reduce pain during labour. The conventional medicines are epidural analgesia, injected drug and complementary approaches are mind body interventions, hypnosis, biofeedback, yoga, music therapy and alternative approaches are acupuncture, acupressure, manual healing, hydrotherapy, TENS, herbal medicine and aromatherapy. The role of midwife is close monitoring of the patients using CAM and proper documentation. The present article suggests that complementary and alternative medicine may be helpful for women with labour pain.

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#### INTRODUCTION

##### **An Overview on Labour Pain**

Childbirth is a process of delivery of fetus, placenta and its membrane from the uterus through the vagina. Labour process is a physiological and psychological challenge for every women. Labour pain is one of the most intense forms of pain that can be experienced. Several factors which affects the perception of women during labour experience which is unique. However as a consistent finding, labour pain is ranked high on the pain rating scale when compared to other painful life experiences.<sup>1</sup>

##### **Etiology of Labour pain**

- As the uterus contracts, the blood vessels contract, reducing the blood supply to uterine cells which causes anoxia.
- Stretching of the cervix and perineum also causes pain during labour.
- Additional discomfort in labour may stem from the pressure of the fetal presenting part on tissues including pressure on surrounding organ, such as the bladder, urethra and lower colon.<sup>2</sup>

##### **Physiology of Labour pain**

According to Rowland, the labour pain is the result of many complex interventions. Pain is a basic protective mechanism

that alerts a person that something harmful is happening somewhere in the body. Pain sensation begins in nociceptors, the end points of afferent nerves which are activated by mechanical, chemical or thermal stimuli. Nociceptors are predominantly in the skin, bone periosteum, joint surfaces and atrial wall. When the end terminals are simulated, chemical mediators such as prostaglandins, histamines, bradykinin and serotonin are synthesized. These impulses are transmitted to the spinal cord and causes pain during uterine contractions.<sup>3</sup>

The pain impulses during labour are transmitted via T1–T12 spinal nerve segment and lower thoracic and lumbar spinal nerves. These originate from the body of uterus and cervix. Pain relief measures for the first stage of labour, therefore, must block these upper synapse sites.<sup>4</sup>

##### **Factors Influencing Labour Pain**

During childbirth labour pain is different to each and every women. The dimensions such as biological, psychological, social, spiritual, cultural and educational factors of each women having an impact on how they express their labour pain by themselves and indeed of how they perceive their pain during labour.<sup>5</sup>

A variety of factors which affects the intensity and duration of pain experienced by women in labour. These include tolerance

\*Corresponding author: **Annie Annal M**

Department of Obstetrics and Gynecology, Kasturba Gandhi Nursing College, Sri Balaji Vidyapeeth, Puducherry, India

of pain perception, coping mechanism, cultural characteristics and environment.<sup>6</sup>

### **Mechanism of Labour Pain**

Active process of delivering a fetus is called as labour and which is characterized by regular and rhythmic uterine contractions which increase the frequency, duration and intensity of pain. There are two components of labour pain, namely visceral and somatic pain. The cervix plays a vital role throughout the various stages of labour.

Visceral pain starts during the early first and second stages of labour. With each uterine contractions, fetal axis pressure is transmitted to the cervix which causes stretching effect and distension of lower uterine segments and activating excitatory nociceptors. These afferent nociceptors are usually innervated in the endo-cervix and lower segment from T10-L1.

Somatic pain occurs during the late first and second stage of labour. It arises mainly due to afferent nociceptors that innervate the vaginal part of the cervix and perineum. Pain occurs as a result of stretching and distension of lower uterine segments, ischaemia and injury to the pelvic floor muscles, perineum and vagina.<sup>7</sup>

### **CAM Therapies**

Complementary and Alternative Medicine (CAM) which is typically labeled as being outside of conventional medicines which contains a wide ranging spectrum of interferences that aims to ensure health and happiness to indulgence illness.<sup>8</sup>

Complementary and Alternative Medicine (CAM) can be defined as the practices that are not in the part of conventional medical system. Some approaches have been reclassified as part of conventional medicine.<sup>9</sup>

### **Classification of CAM Therapies**

The classification of Complementary and Alternative Medicine (CAM) are

#### **Alternative Medical Systems**

Alternative medical systems are building up based on whole systems of theory and practice. Often, these systems has evolved apart from an earlier are used as conventional medical approach.

**Examples:** Homeopathic and neuropathic medicines.

#### **Mind Body Interventions**

It uses in a variety of techniques which are designed to enhance the mind's capacity that affects bodily functions and symptoms.

**Examples:** Mediations.

#### **Biological Based Therapies**

In biological based therapies, CAM use substances are seen in nature like food, herbs and vitamins.

**Examples:** dietary supplements and herbal products.

#### **Manipulative and Body-Based Methods:**

It is based upon manipulation and movements of body in one or more parts.

**Examples:** Massage and Chiropractic or osteopathic manipulation.

### **Energy Therapies**

An energy therapy is used in energy fields. They are of two types

- Bio-field therapies: A Bio-field therapy affects the energy field that surrounds the human body and it penetrates.
- Bioelectromagnetic - based therapies: It involves the use of electromagnetic fields, such as pulsed fields or magnetic fields.<sup>10</sup>

### **CAM Approach of Labour Pain Control**

Even though childbirth is a natural process, it has been evidenced that pain is considered as severe or extreme in more than half of cases.

According to WHO (2012), nearly 80% of health care in developing countries are comprised of indigenous traditional health practices rather than western biomedicine.<sup>11</sup>

### **Common Reason Approaching CAM Therapies**

- CAM is used to treat the person as whole.
- Desire to do everything possible.
- To feel hope and gain control.
- Enhance the immune system and fight against disease.
- Manage the symptoms and reduce side effects.
- Help the client to make decision making in matters related to their health.
- To improve quality of life.<sup>12</sup>

### **Conventional Treatments**

#### **Regional Analgesia-Epidural**

An epidural analgesia is a local anesthetic agent to the nerves conducting the pain messages to the spine. A fine flexible tube catheter is usually placed on the epidural space which allows infusion throughout the labour.<sup>13</sup>

#### **Injected Drugs**

Injectable opioids are also called as narcotics which are used for managing the pain during labour. These drugs are injected into a vein or a muscle that spreads throughout the body system to help in relieving pain.<sup>14</sup>

#### **Nitrous Oxide**

Nitrous oxide gas is considered as an analgesic or pain relief. As much higher, the doses are sometimes used in operating room in combination with other drugs. The nitrous gas can be used as an anesthetic agent that leads to loss of sensation.<sup>15</sup>

### **Complementary Approach**

#### **Hypnosis**

During hypnosis many suggestions are made in focusing on diminishing the pain, fear and anxiety. Women should have an idea on the words or images from the therapists, dissociation, suspension of critical judgment and responsiveness before her first hypnotic experience.<sup>16</sup>

### **Biofeed back**

Biofeedback is used as a monitoring instrument to provide physiological information that is normally unaware. Information from the electrodes is used as a monitoring box that registered the results by audio or visual meter that varies, increases or decreases the functions.<sup>17</sup>

### **Yoga**

Yoga arise from the Indian origin which have control over mind and body. Through special training, it enhances the changes in the consciousness, relaxation, receptivity to the world and gives inner peace. Yoga lessens the duration of labour, reduces pain and decrease the use of analgesic medications.<sup>9</sup>

### **Sophrology**

The word Sophrology derives from the Greek words, 'sos' which means harmony and 'phren' means conscience or spirit. The main purpose is to improve the control over body and spirit through dynamic relaxations such as concentration, contemplation and meditation.<sup>9</sup>

### **Music Therapy**

Music meets many of the physiological and psychological needs of the patients. In obstetrics, music therapy used as a sedative to provide relaxation and promote comfort during the early stage of labour.<sup>18</sup>

### **Alternative Approach**

#### **Acupuncture**

Acupuncture involves in the insertion of fine needles into different parts of the body. It is mainly aim to treat illness and soothe pain by stimulating the acupuncture points. Acupuncture points are used to reduce pain during labour, which are located on the hands, feets and ears. Several theories have been presented based on how exactly the acupuncture works. One of the theories proposes that pain impulses are blocked from reaching the spinal cord or brain at various 'gates' to this areas.<sup>19</sup>

#### **Acupressure**

Acupressure is a therapy in which giving pressure to stimulate the acu points by using hands, fingers and thumbs. It promotes blood circulation and secretion of neurotransmitters which helps to maintaining the body functions normally and enhance well being.<sup>20</sup>

#### **Homeopathy**

According to homeopathic theory, It involves the use of diluted form of extracts to stimulate the self-healing mechanism. The amount of prescribed medicine is too less which is incapable to measured in the molecular amount.<sup>21</sup>

#### **Manual Healing**

Manual healing is a method which is used now-a-days during labour. It includes

#### **Therapeutic Touch**

It helps to communicate care and give reassurance to laboring women. Painful uterine contractions can be treated by giving

pressure on women's back, abdomen, hips, thighs, sacrum or perineum.<sup>22</sup>

#### **Massage Therapy**

Massage is an ancient technique which is widely employed during labour, however relatively study has been undertaken for examining the effects of massage on women during labour. For a labouring woman, the endorphins are released during massage which can provide natural pain relief. It can also promote relaxation, decreases her stress level, alloy fear and anxiety and lessen pain during labour.<sup>23</sup>

#### **Transcutaneous Electrical Nerve Stimulation (TENS)**

Administrating electrical stimuli in low voltage through the electrodes which is directly applied to the skin. Two pairs of electrodes are used as stimulator in TENS. The upper electrodes are placed at the level of tenth thoracic and the lower pair at the level of second to fourth sacral nerves.<sup>24</sup>

#### **Hydrotherapy**

It helps to undergo labor in water which has been increased dramatically all over the world. The benefits of hydrotherapy includes pain relief during labour which lowers the usage of pharmacological measures.<sup>25</sup>

#### **Herbal Medicine**

In this plant materials are used as medicine and consumed as food for therapeutic purpose. Various herbal medicines are used to prepare the cervix and the uterus for childbirth and reduces pain during labour and delivery.<sup>26</sup>

#### **Aromatherapy**

Aromatherapy is used as an essential oil extracted from the aromatic sources to balance the mind, body and spirit. It involves in physiological effects of massage by using essential oils. The purpose of aromatherapy is to relieve from anxiety, stress and helps in relaxation to women. Massage over the lower back with jasmine, geranium, rose and lavender oil have reported the subjective benefits in labour.<sup>27</sup>

#### **Role of Midwives in CAM**

- Approach CAM with non-judgemental attitude and open communication.
- Close monitoring of the patient using CAM and proper documentation.
- Inform the patient and assist with decision making.
- Advocate the health system to deliver patients in chances to select complimentary therapies.
- Conduct and participate in research activities.
- Seek proper education, training and credentials if practicing CT and integrative therapies.
- Assisting patients to identify criteria to use in identifying competent therapists is another role for nurses.
- Midwives have to demonstrate the history of working collaboratively with CAM professionals. It is one of the responsibility of midwife who recommends CAM therapies.<sup>28</sup>

## CONCLUSION

Pain associated with labour has been described as one of the most intense forms of pain that can be experienced. Several factors affect a woman's perception of labour experience which is unique. CAM therapy exists because of many conventional medicine have been limited and its ability to provide relief and meets the patients need. In labour pain, most of the research demonstrates the greatest benefits of CAM from the beginning of dilatation phase. When woman enters the active phase of labour or during the delivery itself, they are in need of many additional conventional analgesics. It suggests that complimentary medicine may be helpful for the early onset of pain and helps to divert women's attention from labour pain. In the future, the demand for complementary and alternatives medicine will probably increase. The health care providers should facilitate the informed choices through discussion of their own views, experience and knowledge in the field of medicine.

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