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Historical Evolution of Birthing Positions and Factors Hindering the Trial of Alternate Birthing Positions

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Abstract

Aim: Review aims to throw light on the historical evolution of various birthing positions used, scientific relevance of alternate birthing positions, the circumstances that led to a shift in birthing position to horizontal ones and the factors currently existing nowadays that hinders the adoption of alternate birthing positions.

Background: Evidence-based knowledge suggests that the positions taken by women during labour have a tremendous effect on the maternal and neonatal birth outcomes. Women in birth should be permitted to select the position of their choice to birth, preferably alternative birthing positions (including upright, kneeling, squatting and lateral positions) during labour. Now a days, most parturients deliver in a semi-recumbent, lithotomy or dorsal, positions. Hospital admission of laboring women leads to disruptive practices that restrains spontaneous and instinctive attitude of laboring women and the focus is strictly only on intrapartum fetal wellbeing and maternal co morbidities. Respect to women's choice of birthing position and comfort is mostly underrated.

Clinical Significance: Traditionally, laboring women used physiologically appropriate labor positions such as sitting up right, squatting, and even standing in the birthing process. A pregnant woman delivered her infant in more natural physical positions that allowed for flexing of the hips, straightening the pelvis and facilitating the use of gravity, all of which facilitated the fetus moving through the birth canal. Birthing positions can serve as a nonmedical intervention to improve birth outcomes.

Understanding of scientific relevance of alternate birthing positions, the circumstances that led to a shift in birthing position to horizontal ones and the factors currently existing nowadays that hinders the adoption of alternate birthing positions can help in adopting policies and practices that can promote position changes during labour process that suits the choice, satisfaction and comfort of mother also leading to a positive child birth experience.

Keywords: Birth; Labour positions; Feto Maternal Outcomes.

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INTRODUCTION

Child birth is one of the most important event in a woman's life and is a natural physiological

phenomenon. Birthing practices associated are therefore important to the parturient's health and well-being as well as for the better outcome of pregnancy. Birthing positions during labour can affect the passage of fetus through the obstetric canal.

The history of positions adopted during birth clearly shows that there are variations in birthing positions from culture to culture. Evidences are available as early as from 1882 (Engelmann 1882)[1] Vertical positions during childbirth, which include sitting or squatting, standing, kneeling, were commonly practiced in the ancient centuries. Assistive devices like usage of hammocks, birth stools, ropes or knotted pieces of cloth, holding on to furnitures, squatting using bricks, kneeling or crouching to a pile of sand etc were used to achieve upright positions during childbirth.[2-3]

Many international organizations have come up recently with the recommendations that supports the use of alternate birthing positions. (National Institute for Health & Care Excellence, 2017; Queens land Health, 2018; Royal College of Midwives, 2018; World Health Organization, 2018).[4-7] Cochrane Collaboration has conducted and published systematic reviews in this topics in 1999, 2004 & 2012. The findings of these reviews suggested several possible benefits for upright posture in women during labour without epidural anaesthesia, such as reduction in the duration of second stage of labour (mainly from the primigravid group), reduction in episiotomy rates and assisted deliveries.[8] World Health Organization (WHO) in a publication called "Care in Normal Birth," concluded that women in labor should be given choice and chance to adopt any position they like, while preferably avoiding long periods lying supine (WHO, 1996).

WHO also recommended the need of training birth attendants in supporting birthing in other positions than supine, since much of the positive effect of upright birthing positions depends on the birth attendant's experience with the position and willingness to support the mother's choice of position." Intrapartum care for a positive childbirth experience (2018) proposed by WHO also supports the usage of upright position during labour for women. For women with & without epidural analgesia, encouraging the adoption of a birth position of the individual woman's choice, including upright positions, is recommended. (Recommendations 34 & 35).[7]

Lamaze International also points to the benefit of non-supine positions for birth. American College of Obstetricians and Gynecologists (ACOG) also recommends that, for most people giving birth, "no one position needs to be mandated nor prescribed" (2017). In a Committee Opinion called "Approaches to Limit Intervention During Labor and Birth," ACOG states that it is normal for people in labor to assume many different positions and that no one position has been proven best.[9]

History and custom have decreed a choice of child birth position assumed during labor and delivery. Active positions like upright, kneeling, squatting, all fours, side lying, or asymmetric positions, which have historically been favored by many cultures is not been supported by modern obstetric practices. Report of Listening to Mothers II survey also points that 57% of the women gave birth in supine positions with only 35% birthed in other semi sitting positions.[10]

Care givers around the world currently favor more passive positions during labor and routinely position women in the lithotomy position during normal vertex vaginal deliveries which can cause many adverse birth outcomes (namely prolonged labour, postpartum haemorrhage) and can lead to negative maternal & neonatal outcomes (such as foetal asphyxia and respiratory compromise).

Historical Evolution of Birthing Positions & Current Scenario

Numerous ancient paintings found on the walls of caves or grottos show laboring women giving birth in a vertical birthing positions. Some of them depict women sitting, leaning back against the wall, with her legs which are spread wide, or women who are standing and holding on for example, a tree etc.[11,12]

In the descriptions of Greek, Egyptian and Roman mythology, the goddess of childbirth and midwifery Elyithya was often shown laboring in a kneeling position. A variation of the kneeling position that was practiced in ancient times was hands and knees position (all fours position), although the mother wasn't always completely on her hands and knees.

To adopt a sitting position, already at the beginning of the 2nd century, a birthing chair, at first recommended by the greek gynecologist Soranus of Ephesus was being used, and then it was used by consecutive historical ages. Also in the Middle Ages a specially designed for childbirth, decorated chair was used, which in wealthy families was inherited property, while among the poorer people it was passed from one family to another when

necessary.[14,15]

In the era of Renaissance, a so called "living birthing chair" was also used during labor. The woman giving birth sat during labor on the lap of an accompanying person, which sometimes was her husband.

Fig. 1(a): Filippino woman birthing in full squat position[13]

Fig. 1(b): South Indian carving of a woman giving birth in a standing squat[13]

Fig. 1(c): Childbirth in Kneeling Position: Statue from Costa Rica.[13]

The birthing chair was constantly modified in order to facilitate the observation of labor, but also for the greater convenience of the laboring woman. The diameter of the birth aperture was changed, various types of backrests were used. Birthing chair dates back to Babylonian culture of 2000 B.C. In 1679 Hendrik van Deventer constructed and put into use a birthing chair with adjustable back, which allowed the woman to take a lying position during the interval between contractions. This was very helpful, because births in those times often lasted for one or two days, or even longer, and the change of position brought significant relief.

Until the mid-eighteenth century, the birthing chair was an obligatory equipment of every midwife, but already earlier, at the turn of the 16th and 17th century when physicians started to deal with obstetrics a horizontal position was promoted, mainly in order to facilitate observation of labor.[16]

Obstetric forceps introduced into medical practice in England and France in the 17th century, favored dissemination of the supine position because only in this position they could be applied. In 1668, François Mauriceau published a treatise on obstetrics, in which he recommended that pregnant women should not use birthing chairs but lay on their backs. He explained this change by a better possibility of controlling the delivery process and the possibility of forceps maneuver if necessary.[17-19]

To spread horizontal position among the French aristocracy contributed the delivery of Madame de Montespan, mistress of King Louis XIV, who was giving birth in the supine position so that the king could watch the birth of his child from behind the curtains. As a result, the thinking and approach of the female sex has changed over time to non-horizontal birth positions. Influential women recognized the squatting position during labor as plebeian and far from "refinement".

Breaking the ban on admitting men obstetricians to the delivery room at the beginning of the Renaissance and the invention of obstetric forceps and other devices facilitating the control of labor, resulted in popularization of the horizontal position as convenient especially for medical personnel.[20]

Invention of anaesthesia reduced women's ability to actively participate in labor and childbirth process requiring them to lie down to be delivered. Ether was used as an anesthetic by inhalation in the nineteenth century. From the time of advent of general anaesthesia, the birth positions which more easily let themselves to the convenience of the accoucheur became the choice of childbirth position. This practice was spread through out

Fig. 2(a): Birthing Chair

Fig. 2(b): Birth Stool

most of the Western Europe and America.

Childbirth began to be more often treated as a procedure in which the most important is to reduce the number of deaths of children and mothers with the use of available medical equipment. Over time, as the medical technology developed, the feelings of the delivering woman and her natural, instinctive approach to the birth ceased to be important for medical staff and the forced acceptance of the supine position became more common.

The consequence of the popularization of the horizontal position was the emergence of the delivery bed, which was initially used only for "complicated" labors, but due to the convenience of the doctor and midwife, it became more and more popular. In the 19th century, a supine position was in force in Poland during delivery. The births were most often taken at home on the so called "transverse bed", which meant positioning the woman giving birth transverse on her bed, with her feet rest on the chairs.

In midwifery schools, the delivery bed specifically was not used so that the students would be able to take delivery at home. At the turn of the 19th and 20th centuries, discussions on positive and negative aspects of delivery in a horizontal position began. The reason for change from a reclining to a horizontal position is not clear, although the famous American obstetrician William Dewees wrote in the late 1800s advocating the latter position, since it afforded convenience to the accoucheur.[18]

During eighteen to twentieth century's, childbirth in horizontal positioning prevailed. There was almost no control of or examination for medical licensing, and medical schools enforced only minimal requirements which was also undoubtedly greatly affected by accoucheur taking advantage of horizontal positioning.

In 1870, Von Ludwig wrote that the position of a woman giving birth should be natural, that is, it should facilitate childbirth, giving the possibility of the best collaboration with the midwife, usage by the woman maximum of pushing forces and reducing the risk of damage of mother and fetus.[18]

There is no scientific research base behind the adoption and use of the lithotomy position. By exploring the circumstances that existed when the maternal birth position changed, we see that the position was altered as a result of inter professional struggles of surgeons and midwives and by the development of obstetrics as affected by the practice of lithotomy. A position was implemented without verifying its appropriateness.

Little only is been done in modern era too to encourage alternative birthing positions that may be better accepted by and more beneficial to the parturient woman, her child, and the birth attendant. Medical professionals around the globe still advocate non-upright positions even today, though current obstetric textbooks state that it is beneficial, especially for first time mothers, to push in upright positions. People giving birth are encouraged to push in a back lying or semi sitting position, one that puts weight on the tailbone mostly now days. Now days, it is very common that most women in across the world deliver in a dorsal or lithotomy position.

Parturient receives fewer opportunities to labour and deliver in a preferred position, assuming the recumbent one as standard because of its easier monitoring of fetal wellbeing, administration of intravenous therapy, loco-regional anaesthesia, and performance of medical procedures, perineal support, and birth assistance state that it is beneficial, especially for first time mothers, to push in upright positions

Literature reveals that the evidence had been available for several decades as to the physiological

advantages of labor and delivery in the upright position. Certain principles of physics also apply to childbirth as studies on the process of labor and delivery suggests this with evidences toxo graphically and radiographically.

Hindering Factors In Adoption of Alternate Birth Positions[21]

1. *Comfort/Choice (Convenience) of the Health Care Provider*

The health care providers & midwives prefer the lithotomy position more as compared to alternative birth positions due to several factors. Positioning in lithotomy or horizontal positions gives a good view of the perineum, ease for labour monitoring & performing cervical examinations and for administering anesthetics during labor and delivery. Physical strain of the person who conducts the delivery also is reduced when labour is done in lithotomy position. Moreover, most of the midwives find horizontal positions comfortable and familiar to themselves. Many are not much aware of the disadvantages of the lithotomy as a birth position.

2. *Lack of Skill/ Experience & Exposure of Health Care Providers In Conducting Deliveries In Alternate Positions*

Systematic reviews showed that providers were often unaware of or inexperienced in the use of non-supine positions. The lack of necessary skills and training on birthing in alternate positions can be a hindering factor for promoting non supine birthing. Additional training and practice is required forthe adoption of upright positions as many practising doctors and midwives may not be familiar with the method.

Most midwives do not have the necessary skills and competence to conduct childbirths in alternative birthing positions and are not confident enough with their own skills. Theory of birthing is often taught in undergraduate training. But hands on practice is lacking. So, they are unable to grasp the skill and competence on how to practically position the women in alternative birth positions.

3. *Lack of Facilities/Equipment (Infrastructure) & Manpower*

Many assistive birthing devices can be used for assisting birthing women to help in delivering in natural positions such as a birthing stool, birthing ball etc. These are not available or even tried in many labour room settings. Even health care providers raised safety concerns about women coming "off the bed" during labour. Over crowding and lack of space in birth rooms too prevent women from adopting an upright position. Number of staffs should be adequate to provide one to one care and supervision to women in labour to make them adopt and practice upright positions in labour. In view of inadequate man power, existing midwives will not get ample time to teach mothers about alternative birth positions.

4. *Language & Cultural Barriers*

One major cause attributed to midwives not supporting childbirth in alternate positions are the language barriers. Communication problems can exists between them and the labouring women. Midwives experience difficulty in instructing women to adopt various positions due to the cultural barriers too.

5. *Lack of awareness of women about different birthing positions*

Women today have limited experience with physiologic birth, largely because of the technological approach favored in hospitals. This approach left a generation of women with stressful birth memories .

Data from cross-sectional surveys conducted in Africa (Malawi and Nigeria) showed that more than 90% of women were aware of the supine or semirecumbent positions for labour and childbirth but less than 5% were aware of alternative positions (e.g. squatting, kneeling, and on hands and knees). Data from the study in Nigeria also showed that only 18.9% of women would have been prepared to adopt an alternative position if it had been suggested by a health care professional.[22]

6. *No Respect to Women's Choice / Right of Decision Making*

Recent World Health Organization (WHO) review revealed lack of respect for women's preferred birth positions. Making woman adopting an undesirable position made women passive participants in birth.[35] The use of forcing women into the care provider's preferred position has also been described as "obstetric violence." Obstetric violence is, in its simplest form, a form of violence against women that occurs in the childbirth setting. It is an attempt to control a woman's body and decisions and may involve coercion, bullying, threats, and withdrawal of support, as well as other violations of informed consent and physical force. Obstetric violence might manifest as forcing a woman supine because that is the doctor's preferred position for birth. Forcing someone into a

particular delivery position could be viewed by the courts as negligence or battery.[23]

CONCLUSION

Women in labour should be allowed and encouraged to follow her own instincts and should be encouraged to assume the position which will assist her to attain maximum comfort and physiological advantage during her labor and delivery. Women should be able to choose their position for labor and birth freely and without restriction from their providers, yet this is often not the case, even today.

Although most women envision birth in a semi-reclining or semi-sitting position these days, there are many other possible positions in which to give birth.However, it's always important to point out that there is no one "right" position for laboring or pushing out a baby. All positions have pros and cons. Care providers should encourage women to experiment with different positions and then trust that the woman's body will tell her the right position for her needs.

Today, with more women and their families exercising their rights to actively participate in the birth experience and to make it a more personal and more physiologically and psychologically advantageous experience, the time is ripe for further scientific investigation of the lithotomy or dorsal positions. Possibilities should be explored to design and plan studies that evaluate the different birthing positions options that have an important bearing on the health and safety of the parturients and the newborns.

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