Review of Contemporary Philosophy
ISSN: 1841-5261, e-ISSN: 2471-089X
Vol 22 (1), 2023
Pp 4956 - 4964

Comprehensive Analysis of Abnormal Labor: Etiology, Diagnosis, Management Strategies, Nursing Interventions, And Maternal-Fetal Outcomes

[1]- Hassan Yazeed Yahya Ghazwani,[2]- Fatima Galeb Ali Alanbari,[3]-Nourh Dafi Al Dosari ,[4]-Mohammed Matar Al-Anzi.[5]- Fatimah Suwaylih Almutairi,[6]-Ahmad Hussain Alatawia ,[7]-Bader Musllam Muslm Albalawi,[8]- Noha Mohammed Hakami ,[9]-Sara Abdulaziz Masoud ,[10]-Yasmeen Hameed Obaid Al Anazi,[11]-Soad Mansour Ahmed Abbas,[12]-Nawal Ali Ezzei Refaei,[13]-Modhi Khulaif Alruwail,[14]-Mohammed Saleem Eid Albalawi,[15]-Norah Turki Madi Hakami

[1] Ksa, Ministry Of Health, Eastern Health Sector, Faifa, Jizan
[2] Ksa, Ministry Of Health, Jeddah
[3] Ksa, Ministry Of Health, Dharat Namar
[4] Ksa, Ministry Of Health, King Khalid Hospital In Al Kharj.
[5] Ksa, Ministry Of Health, Jeddah
[6] Ksa, Ministry Of Health, King Khalid Hospital Tabuk
[7] Ksa, Ministry Of Health, King Khalid Hospital Tabuk
[8] Ksa, Ministry Of Health, King Fahad Central Hospital
[9] Ksa, Ministry Of Health, King Fahad Central Hospital
[10]Ksa, Ministry Of Health, Hafar Al Batin Central Hospital
[11]Ksa, Ministry Of Health, Erada Mental Health Hospital In Jazan
[12]Ksa, Ministry Of Health, Eradah Mental Health Hospital In Jazan
[13] Ksa, Ministry Of Health, Turaif General Hosptail
[14]Ksa, Ministry Of Health, King Khalid Hospital Tabuk
[15]Ksa, Ministry Of Health, King Fahd Hospital Jazan

Abstract:

Background: Abnormal labor deviates from the typical progression of childbirth, encompassing prolonged, protracted, or arrested labor. It is a significant concern due to its association with adverse maternal and fetal outcomes. Understanding its etiology and management is crucial for improving clinical practices.

Aim: This study aims to explore the etiology, diagnostic methods, management strategies, nursing interventions, and maternal-fetal outcomes associated with abnormal labor.

Methods: A comprehensive review of literature was conducted, focusing on clinical evaluations, pathophysiology, and management approaches for abnormal labor. Epidemiological data and risk factors were analyzed alongside diagnostic and therapeutic tools, including pharmacological interventions such as oxytocin.

Results: Abnormal labor, often attributed to issues with the "3 Ps" (power, passage, and passenger), is prevalent in 20% of labor cases and is a leading cause of cesarean deliveries. Key maternal risk factors include advanced maternal age, nulliparity, and non-gynecoid pelvis, while fetal factors include macrosomia and malpresentation. Diagnosis relies on time thresholds, physical examinations, and uterine activity monitoring. Management strategies emphasize conservative approaches, such as manual fetal rotation and pharmacological augmentation. Nursing interventions play a pivotal role in monitoring and supporting labor progression, ensuring maternal and fetal safety.

Conclusion: Abnormal labor presents a complex interplay of maternal and fetal factors that necessitate a multidisciplinary approach. Early diagnosis, evidence-based management, and effective nursing care are critical for minimizing complications and improving outcomes.

Keywords: abnormal labor, labor dystocia, maternal-fetal outcomes, nursing interventions, labor management, uterine activity, oxytocin

Received: 10 October 2023 **Revised**: 24 November 2023 **Accepted**: 08 December 2023

Introduction:

Normal labor is characterized by regular uterine contractions that lead to progressive cervical effacement and dilation. Abnormal labor, on the other hand, refers to deviations from these standard patterns, signifying a dysfunctional progression of labor. Recognizing and understanding the hallmarks of normal labor is crucial for identifying and managing labor abnormalities effectively [1]. Labor is divided into three distinct stages. The first stage begins with uterine contractions that cause progressive cervical changes and ends with full cervical dilation. This stage is further divided into two phases: the latent phase, during which cervical dilation ranges from 0 to 5 cm, and the active phase, during which cervical dilation progresses from 6 cm to complete dilation. The second stage of labor starts with a complete cervical dilation and concludes with the delivery of the fetus. The third stage begins after fetal delivery and ends with the delivery of the placenta [2]. Abnormal labor may occur during any of these stages and is described in terms of prolonged, protracted, or arrested labor progression [3].

Evaluation and Interpretation of Labor Stages

Labor stages and phases are assessed using specific time intervals to evaluate progression. Ideally, labor progress is monitored every two hours through physical or pelvic examinations. During the first stage, cervical dilation progresses from 0 to 10 cm. The latent phase includes dilation from 0 to 5 cm, while the active phase begins at 6 cm and ends with complete cervical dilation. In the second stage, uterine contractions and maternal expulsive efforts facilitate the descent of the presenting fetal part, leading to fetal delivery. The third stage spans the time between fetal delivery and placental delivery. For full-term singleton pregnancies, specific time thresholds represent the 95th percentile for normal labor progression. These thresholds are used to classify abnormal labor [1].

Abnormalities in Labor Progression

In the first stage, latent phase prolongation is defined as a duration exceeding 20 hours in nulliparous patients and 14 hours in multiparous patients. Despite its variability and slower progression, latent phase prolongation alone does not typically necessitate cesarean delivery. Active phase abnormalities include protraction and arrest disorders. Protraction occurs when there is no cervical dilation after four hours of adequate contractions with ruptured membranes or six hours of inadequate contractions despite oxytocin administration [1]. Second-stage abnormalities involve protraction and arrest disorders as well. In nulliparous patients, the second stage is considered prolonged if it lasts more than three hours without an epidural or four hours with an epidural. For multiparous patients, these thresholds are two and three hours, respectively. Prolonged second-stage labor may be acceptable if maternal and fetal statuses remain reassuring and there is continued descent of the presenting fetal part. Third-stage abnormalities are characterized by placental retention exceeding 30 minutes after fetal delivery. Timely intervention is necessary in such cases to prevent complications. Understanding these criteria and time thresholds is essential for the accurate classification and management of abnormal labor [1].

Etiology of Abnormal Labor

The progression of normal labor is influenced by three fundamental factors commonly referred to as the "3 Ps": power, passage, and passenger. "Power" pertains to the strength and efficiency of uterine contractions and maternal expulsive efforts. "Passage" denotes the maternal pelvis, while "passenger" represents the fetus. Abnormal labor progression may arise from issues involving one or more of these elements. During labor, the size, position, and presentation of the fetus, along with the adequacy of the maternal pelvis, are

evaluated as uterine contractions propel the fetus. Specific fetal positions or presentations, such as asynclitism, extension of the fetal head, occiput posterior or transverse positions, and mentum or brow presentations, may contribute to or independently cause abnormal labor progression or labor dystocia. In situations where unfavorable dynamics between the fetus and maternal pelvis are evident, cesarean delivery may become necessary [4][5]. A less common factor contributing to protracted or arrested labor is the presence of a Bandl ring, which is a constriction between the upper, thicker contractile uterine segment and the lower, thinner uterine segment. The etiology of Bandl rings during labor remains uncertain, but prolonged labor and labor dystocia have been implicated as potential causes [6].

Risk Factors Associated with Abnormal Labor

Abnormal labor progression can arise from maternal or fetal risk factors. Maternal factors include advanced maternal age, the presence of a Bandl ring, chorioamnionitis, epidural analgesia, gestational diabetes, hypertensive disorders, inadequate uterine contractions, insufficient supportive care during labor, excessive weight gain during pregnancy, non-gynecoid maternal pelvic anatomy, nulliparity, poor hydration and nutrition during labor, post-term pregnancy, and short maternal stature. Each of these conditions can independently or collectively hinder the normal progression of labor. Fetal factors that contribute to abnormal labor include a high fetal station at full cervical dilation, macrosomia, malpresentation, and nonreassuring fetal heart rate patterns. These fetal conditions may complicate labor progression, requiring careful evaluation and, in some cases, operative intervention to ensure maternal and fetal safety [7].

Epidemiology

Pelvic morphology exhibits considerable variability among women, and the relationship between the maternal pelvis and the fetus is notably constricted, unlike in other primates [8]. Approximately 20% of all labors involve disorders of protraction or arrest, which are the leading causes of primary cesarean deliveries [9]. Abnormal labor characterized by true labor dystocia poses significant risks, including maternal and fetal injury or mortality. The increasing rate of cesarean deliveries in developed nations has prompted the development of strategies to safely reduce the incidence of primary cesarean sections. Guidelines now emphasize conservative management approaches during the first and second stages of labor [10]. The third stage of labor, which involves the delivery of the placenta, is also critical. Complications during this stage, such as postpartum hemorrhage, may necessitate blood transfusions and can lead to maternal morbidity or mortality. Postpartum hemorrhage affects approximately 5% of all deliveries. Under active management, the average duration of the third stage is five to six minutes, with 90% concluding within ten minutes. However, the likelihood of postpartum hemorrhage increases significantly when the third stage exceeds 18 minutes and becomes markedly higher beyond 30 minutes [11].

Pathophysiology

The labor curve for the first stage of labor was initially described by Friedman but has since been updated by Zhang and colleagues [12]. Contemporary reference graphs indicate that the latent phase of labor is longer than previously believed, and the active phase begins at six centimeters of cervical dilation. Induced labor typically exhibits a prolonged latent phase during the first stage compared to spontaneous labor. However, the duration of the active phase in both the first and second stages remains similar regardless of whether labor is induced or spontaneous. Insufficient uterine activity is the most prevalent cause of abnormalities in the first stage of labor [13]. Labor is a demanding physical process, and prenatal exercise has been shown to enhance uterine contractility. Increased physical activity is associated with elevated oxytocin levels and a reduced need for labor induction or augmentation [14]. Maternal inactivity during pregnancy has been linked to prolonged labor. A prospective cohort study revealed that physically active individuals during pregnancy experienced shorter latent and active phases of labor. Regular prenatal exercise is, therefore, strongly encouraged to support labor progression [14]. The underlying pathophysiology of abnormal labor remains poorly understood, likely due to its multifactorial nature. Current management strategies and interventions often fall short of success. Future advancements in diagnostic tools and targeted therapeutic approaches, addressing specific etiologies, may provide new opportunities for managing labor abnormalities more effectively [15].

Toxicokinetics

Oxytocin is a pivotal pharmacological agent for augmenting insufficient uterine contractions and addressing abnormal labor. It is among the most frequently utilized medications in obstetrics. The responsiveness to exogenous oxytocin begins around 20 weeks of gestation, increases with advancing gestational age, and plateaus at approximately 34 weeks [16]. Oxytocin has a short plasma half-life, ranging from three to six minutes, and is typically administered via continuous intravenous infusion during labor. Adverse maternal effects associated with oxytocin use include flushing, nausea, vomiting, headache, tachycardia, and hypotension [17]. In rare cases, extended high-dose oxytocin exposure, particularly when combined with hypotonic solutions, may lead to maternal water retention and hyponatremia. This phenomenon is attributed to the structural similarity between oxytocin and vasopressin, resulting in cross-reactivity with renal vasopressin receptors [18]. A common complication of oxytocin administration is uterine tachysystole, defined as six or more contractions within a ten-minute interval, averaged over thirty minutes. Insufficient uterine relaxation between contractions can lead to diminished fetal oxygenation [17]. Given the potential for significant harm if administered incorrectly, oxytocin is classified as a high-alert medication [19].

History and Physical Examination

The onset of labor is characterized by regular uterine contractions that facilitate cervical effacement and dilation. A comprehensive obstetric history should document the onset and frequency of contractions. Abdominal examination plays a crucial role in estimating fetal weight and assessing fetal presentation. Monitoring uterine activity provides insight into the frequency of contractions, while internal pressure catheter monitoring quantifies their intensity. Fetal heart rate tracing is essential to assess fetal well-being throughout labor. Digital vaginal examinations, conducted at intervals during labor, evaluate maternal pelvimetry, the shape and capacity of the bony pelvis, and cervical effacement and dilation. These serial examinations are instrumental in determining the fetal position, station, and descent of the presenting part, thereby aiding in the assessment of whether labor progression is normal or abnormal [20].

Evaluation

Monitoring the progression of labor is a pivotal aspect of intrapartum care. Maternal uterine activity is evaluated through manual palpation, external tocodynamometry, or intrauterine pressure catheter monitoring. External tocodynamometry targets a frequency of 3 to 5 uterine contractions within a 10-minute period, with effective contractions lasting between 30 to 40 seconds. In cases involving ruptured membranes, intrauterine pressure catheterization is frequently employed to measure the intensity of uterine contractions. This technique involves inserting a catheter through the cervix into the uterine cavity, enabling direct intrauterine pressure measurement. Contraction intensity is quantified using Montevideo units (MVUs), calculated as the aggregate net contraction pressures over 10 minutes. Adequate uterine activity is generally targeted at 200 to 250 MVUs. Although this approach has certain limitations, no more accurate or practical alternative has been established. Additionally, electrohysterography, a novel technique utilizing externally applied abdominal electrodes to monitor myometrial contractions, has shown potential, but it has not yet been integrated into standard clinical practice [21]. Another crucial element of intrapartum care is assessing fetal position. Studies consistently indicate that an occiput posterior fetal position is associated with increased adverse outcomes, including prolonged second-stage labor and elevated cesarean delivery rates. Randomized trials have demonstrated that manually rotating the fetus from an occiput posterior to an occiput anterior position can effectively reduce the duration of the second stage of labor. Manual rotation has proven more effective than maternal repositioning during labor, requiring less technical expertise and posing fewer risks compared to instrumental rotation [22].

Treatment and Management

The progression of abnormal labor is linked to several adverse maternal and fetal outcomes, necessitating proactive management to mitigate these risks. Labor and delivery units typically follow established protocols for the administration of oxytocin to enhance insufficient uterine contractions. These protocols

detail the appropriate medication dosages, criteria for incremental adjustments, and the monitoring of maternal and fetal status for potential adverse effects. For protracted or arrested second-stage labor, options may include operative vaginal delivery using forceps or vacuum, performed by a skilled obstetrician. In cases where labor prolongation persists, particularly during the active phase of the first stage, cesarean delivery is often indicated. For prolonged third-stage labor, manual placental extraction may be necessary.

Prolonged or Protracted First Stage

Latent Phase

The latent phase can extend over several hours or even days. Decisions regarding hospital admission are influenced by multiple factors, including cervical status, the emotional condition of the patient, associated complications, pain tolerance, and proximity to the hospital. Studies suggest that hospital admission during the latent phase may be associated with increased obstetrical interventions. Thus, it is essential to weigh the benefits of hospital admission against outpatient management options during this phase [23]. In certain cases, therapeutic rest may be considered, with morphine administered intramuscularly or intravenously at doses of 5 to 10 mg, up to a maximum of 20 mg. Alternatively, a combination of intramuscular morphine sulfate and promethazine may be utilized. For actively managing a prolonged latent phase, oxytocin administration and amniotomy are viable options [24].

Active Phase

In the active phase of the first stage, oxytocin administration and amniotomy are often recommended. If there is no cervical change following 4 hours of adequate uterine contractions exceeding 200 MVUs with ruptured membranes—or 6 hours with adequate contractions, ruptured membranes, and oxytocin augmentation—cesarean delivery is advisable. However, if labor shows slow but steady progress, oxytocin administration is continued.

Protracted or Arrested Second Stage

For cases of minimal (<1 cm) or absent fetal descent after 60 to 90 minutes of maternal pushing combined with infrequent uterine contractions, oxytocin augmentation is initiated. Nulliparous women without epidural anesthesia may push for at least 3 hours, while multiparous women may push for 2 hours before operative intervention is considered. However, if fetal descent or rotation toward a favorable position for vaginal delivery is ongoing and the fetal heart rate is reassuring, operative interventions may be deferred. Manual rotation of the fetus from occiput posterior to occiput anterior presentation may be attempted during a protracted second stage. Women with epidural anesthesia may be granted an additional hour of pushing before operative interventions are considered. When necessary, operative vaginal delivery is an option to address second-stage labor prolongation [25].

Differential Diagnosis

Abnormal labor pain necessitates a differential diagnosis encompassing various conditions that may mimic or coexist with labor abnormalities. Among these are Bandl ring, Braxton Hicks contractions, cervical stenosis, chorioamnionitis, placental abruption, premature rupture of membranes, prodromal labor, uterine Mullerian anomaly, and uterine rupture. Identifying these conditions is pivotal for effective clinical decision-making and the timely implementation of therapeutic interventions.

Prognosis

The prognosis of abnormal labor is influenced by its stage and the timeliness of interventions. During a prolonged latent phase of the first stage, strategies such as amniotomy and oxytocin administration can promote normal labor progression. A randomized controlled trial demonstrated that early amniotomy—within one hour of cervical balloon catheter expulsion—resulted in over twice the labor speed compared to delayed amniotomy in term patients undergoing mechanical cervical ripening [26]. Maternal and neonatal morbidity is linked with prolonged first-stage labor, manifesting maternal fever from

endometritis, shoulder dystocia, hemorrhage, and the need for blood transfusions [27][28]. Abnormalities in the second stage, despite oxytocin use, are associated with third- and fourth-degree perineal lacerations, cesarean delivery, and extended hospital stays [29][28]. For the neonate, risks include admission to the NICU, low Apgar scores, and the requirement for assisted ventilation [29]. Operative vaginal delivery is an option in certain cases of abnormal labor, while cesarean delivery remains a necessity in others, particularly when abnormalities occur in the first or second stages of labor [30]. Advances in cesarean delivery techniques have significantly mitigated risks of injury, blood loss, and infection, contributing to favorable maternal and neonatal outcomes [22].

Complications

Approximately 20% of labors are affected by prolongation, protraction, or arrest. These abnormalities correlate with heightened risks of maternal and neonatal complications, including infections, operative deliveries, low Apgar scores at five minutes, prolonged hospitalization, severe perineal tears, excessive blood loss, and NICU admission [31]. Abnormal labor is a primary indication for cesarean delivery, yet the growing prevalence of this procedure necessitates careful consideration of its long-term implications. The rise in cesarean deliveries in the United States has paralleled increases in complications such as placenta accreta, placenta previa, and cesarean scar pregnancies. These conditions are significant contributors to maternal morbidity and mortality, emphasizing the need for cautious evaluation of cesarean delivery as a management strategy [32].

Deterrence and Patient Education

Educating patients about labor management strategies is essential in minimizing maternal and fetal morbidity associated with prolonged, protracted, or arrested labor. It is critical to inform expectant mothers about interventions like oxytocin augmentation, amniotomy, and manual fetal head rotation when indicated. Active participation in prenatal care, labor, and delivery should be encouraged, with realistic expectations set regarding the unpredictable nature of childbirth. The primary focus remains on achieving a healthy outcome for both mother and child. Regular physical activity during pregnancy benefits maternal and fetal health, with evidence suggesting that walking in late pregnancy may reduce the likelihood of labor induction, operative vaginal delivery, and cesarean section [33]. Additionally, controlling weight gain during pregnancy, especially to mitigate risks associated with gestational diabetes and fetal macrosomia, may reduce the incidence of abnormal labor [34]. Informed decision-making about labor induction timing, ensuring adequate hydration and nutrition during labor, and having a reliable support person can also help optimize the labor process and minimize dysfunction. Dysfunctional labor can be a distressing experience, underscoring the need for a structured team approach to its management for optimal maternal and neonatal outcomes.

Enhancing Healthcare Team Outcomes

The effective management of labor requires a coordinated interprofessional approach involving obstetric nurses, midwives, physicians, advanced practice practitioners, anesthesiologists, patients, and their families. Such collaboration has the potential to reduce cesarean section rates and improve labor outcomes overall. Labor is a dynamic process, and decisions regarding management may need to adapt based on evolving maternal and fetal factors. The inclusion of patients in treatment planning is a cornerstone of effective care, with collaboration, shared decision-making, and communication playing crucial roles in achieving favorable outcomes. Psychological and emotional support is particularly important for women experiencing labor abnormalities, as they face a heightened risk of postpartum depression. Challenges such as standardizing care and addressing productivity pressures can strain healthcare providers, potentially leading to insensitivity and burnout over time [35]. Enhancing interprofessional communication and care coordination is vital to improving outcomes for abnormal labor. This approach fosters enhanced team performance, patient-centered care, and improved safety for mothers and infants.

Conclusion:

Abnormal labor represents a significant clinical challenge with profound implications for maternal and fetal health. This comprehensive analysis highlights the complexity of diagnosing and managing labor abnormalities, emphasizing the pivotal role of understanding the "3 Ps" (power, passage, and passenger) in labor progression. The interplay of maternal factors such as advanced age, non-gynecoid pelvic anatomy, and inadequate uterine contractions with fetal factors like malpresentation and macrosomia underscores the multifactorial nature of labor dystocia. Early and accurate diagnosis is central to mitigating risks associated with abnormal labor. Physical examinations, uterine activity monitoring through tocodynamometry or intrauterine pressure catheters, and assessments of fetal position are essential diagnostic tools. Emerging techniques like electrohysterography offer promise but require further validation. The application of time thresholds ensures timely intervention, reducing the likelihood of adverse outcomes such as cesarean deliveries and postpartum hemorrhage. Management strategies should prioritize conservative approaches, including manual rotation of mispositioned fetuses and oxytocin augmentation for inadequate uterine contractions. However, the administration of oxytocin demands careful monitoring due to potential complications like uterine tachysystole and maternal hyponatremia. Nursing interventions are integral to labor management, providing continuous monitoring, emotional support, and clinical care to optimize maternal and fetal well-being. The increasing prevalence of cesarean deliveries necessitates strategies to safely reduce their incidence, focusing on guidelines that support physiological labor progression. Regular prenatal exercise emerges as a promising intervention to enhance uterine contractility and reduce labor complications. Future advancements in diagnostic tools and personalized therapeutic strategies hold potential for more effective management of abnormal labor. In conclusion, addressing abnormal labor requires a multidisciplinary approach that integrates clinical expertise, evidence-based practices, and holistic care. Continued research and innovation are vital to improving outcomes and ensuring the safety and well-being of mothers and infants during childbirth.

References:

1. LeFevre NM, Krumm E, Cobb WJ. Labor Dystocia in Nulliparous Women. Am Fam Physician. 2021 Jan 15;103(2):90-96.
2. Cheng YW, Caughey AB. Defining and Managing Normal and Abnormal Second Stage of Labor. Obstet Gynecol Clin North Am. 2017 Dec;44(4):547-566.
3. Clark SL, Garite TJ, Hamilton EF, Belfort MA, Hankins GD. "Doing something" about the cesarean delivery rate. Am J Obstet Gynecol. 2018 Sep;219(3):267-271.
4. Caughey AB, Sharshiner R, Cheng YW. Fetal malposition: impact and management. Clin Obstet Gynecol. 2015 Jun;58(2):241-5.
5. Zhang J, Troendle J, Reddy UM, Laughon SK, Branch DW, Burkman R, Landy HJ, Hibbard JU, Haberman S, Ramirez MM, Bailit JL, Hoffman MK, Gregory KD, Gonzalez-Quintero VH, Kominiarek M, Learman LA, Hatjis CG, van Veldhuisen P., Consortium on Safe Labor. Contemporary cesarean delivery practice in the United States. Am J Obstet Gynecol. 2010 Oct;203(4):326.e1-326.e10.
6. Gupta R, Nageeb EM, Minhas I, Dang N, Mock SA, Rivera J, Ballas DA. Emergent Cesarean Section in a Bandl's Ring Patient: An Obstetrics and Gynecology Simulation Scenario. Cureus. 2018 Dec 31;10(12):e3800.
7. Lowe NK. A review of factors associated with dystocia and cesarean section in nulliparous women. J Midwifery Womens Health. 2007 May-Jun;52(3):216-28.
8. Pavličev M, Romero R, Mitteroecker P. Evolution of the human pelvis and obstructed labor: new explanations of an old obstetrical dilemma. Am J Obstet Gynecol. 2020 Jan;222(1):3-16
9. Abalos E, Chamillard M, Díaz V, Pasquale J, Souza JP. Progression of the first stage of spontaneous labour. Best Pract Res Clin Obstet Gynaecol. 2020 Aug;67:19-32.
10. Obstetric care consensus no. 1: safe prevention of the primary cesarean delivery. Obstet Gynecol. 2014 Mar;123(3):693-711.
11. Angarita AM, Berghella V. Evidence-based labor management: third stage of labor (part 5). Am J Obstet Gynecol MFM. 2022 Sep;4(5):100661.

12. Caughey AB. Is Zhang the new Friedman: How should we evaluate the first stage of labor? Semin Perinatol. 2020 Mar;44(2):151215.
13. Nachum Z, Garmi G, Kadan Y, Zafran N, Shalev E, Salim R. Comparison between amniotomy, oxytocin or both for augmentation of labor in prolonged latent phase: a randomized controlled trial. Reprod Biol Endocrinol. 2010 Nov 07;8:136.
14. Watkins VY, O'Donnell CM, Perez M, Zhao P, England S, Carter EB, Kelly JC, Frolova A, Raghuraman N. The impact of physical activity during pregnancy on labor and delivery. Am J Obstet Gynecol. 2021 Oct;225(4):437.e1-437.e8.
15. Kissler K, Hurt KJ. The Pathophysiology of Labor Dystocia: Theme with Variations. Reprod Sci. 2023 Mar;30(3):729-742.
16. Wathes DC, Borwick SC, Timmons PM, Leung ST, Thornton S. Oxytocin receptor expression in human term and preterm gestational tissues prior to and following the onset of labour. J Endocrinol. 1999 Apr;161(1):143-51.
17. Hobson SR, Abdelmalek MZ, Farine D. Update on uterine tachysystole. J Perinat Med. 2019 Feb 25;47(2):152-160.
18. Lee HJ, Macbeth AH, Pagani JH, Young WS. Oxytocin: the great facilitator of life. Prog Neurobiol. 2009 Jun;88(2):127-51.
19. Sundin C, Mazac L, Ellis K, Garbo C. Implementation of an Oxytocin Checklist to Improve Clinical Outcomes. MCN Am J Matern Child Nurs. 2018 May/Jun;43(3):133-138.
20. Cohen WR, Friedman EA. Clinical evaluation of labor: an evidence- and experience-based approach. J Perinat Med. 2021 Mar 26;49(3):241-253.
21. Cohen WR. Clinical assessment of uterine contractions. Int J Gynaecol Obstet. 2017 Nov;139(2):137-142.
22. Bertholdt C, Morel O, Zuily S, Ambroise-Grandjean G. Manual rotation of occiput posterior or transverse positions: a systematic review and meta-analysis of randomized controlled trials. Am J Obstet Gynecol. 2022 Jun;226(6):781-793.
23. Seravalli V, Strambi N, Castellana E, Salamina MA, Bettini C, Di Tommaso M. Hospital Admission in the Latent versus the Active Phase of Labor: Comparison of Perinatal Outcomes. Children (Basel). 2022 Jun 20;9(6)
24. Maykin MM, Ukoha EP, Tilp V, Gaw SL, Lewkowitz AK. Impact of therapeutic rest in early labor on perinatal outcomes: a prospective study. Am J Obstet Gynecol MFM. 2021 May;3(3):100325.
25. Gimovsky AC. Defining arrest in the first and second stages of labor. Minerva Obstet Gynecol. 2021 Feb;73(1):6-18.
26. Gomez Slagle HB, Fonge YN, Caplan R, Pfeuti CK, Sciscione AC, Hoffman MK. Early vs expectant artificial rupture of membranes following Foley catheter ripening: a randomized controlled trial. Am J Obstet Gynecol. 2022 May;226(5):724.e1-724.e9.
27. Harper LM, Caughey AB, Roehl KA, Odibo AO, Cahill AG. Defining an abnormal first stage of labor based on maternal and neonatal outcomes. Am J Obstet Gynecol. 2014 Jun;210(6):536.e1-7.
28. Blankenship SA, Raghuraman N, Delhi A, Woolfolk CL, Wang Y, Macones GA, Cahill AG. Association of abnormal first stage of labor duration and maternal and neonatal morbidity. Am J Obstet Gynecol. 2020 Sep;223(3):445.e1-445.e15.
29. Wang L, Wang H, Jia L, Qing W, Li F, Zhou J. The impact of stage of labor on adverse maternal and neonatal outcomes in multiparous women: a retrospective cohort study. BMC Pregnancy Childbirth. 2020 Oct 07;20(1):596.
30. Hofmeyr GJ, Singata-Madliki M. The second stage of labor. Best Pract Res Clin Obstet Gynaecol. 2020 Aug;67:53-64.
31. Pospiech K, Czajkowski K. Amniotic fluid lactate level as a diagnostic tool for prolonged labour. J Mother Child. 2020 Dec 03;24(3):3-7.
32. Antoine C, Young BK. Cesarean section one hundred years 1920-2020: the Good, the Bad and the Ugly. J Perinat Med. 2020 Sep 04;49(1):5-16.

33. Shojaei B, Loripoor M, Sheikhfathollahi M, Aminzadeh F. The effect of walking during late pregnancy on the outcomes of labor and delivery: A randomized clinical trial. J Educ Health Promot. 2021;10:277.
34. Teede HJ, Bailey C, Moran LJ, Bahri Khomami M, Enticott J, Ranasinha S, Rogozinska E, Skouteris H, Boyle JA, Thangaratinam S, Harrison CL. Association of Antenatal Diet and Physical Activity-Based Interventions With Gestational Weight Gain and Pregnancy Outcomes: A Systematic Review and Meta-analysis. JAMA Intern Med. 2022 Feb 01;182(2):106-114.
35. Haahr A, Norlyk A, Martinsen B, Dreyer P. Nurses experiences of ethical dilemmas: A review. Nurs Ethics. 2020 Feb;27(1):258-272.

الملخص:

الخلفية :تشير الولادة غير الطبيعية إلى الانحراف عن التقدم الطبيعي للولادة، وتشمل الولادة المطولة أو البطيئة أو المتوقفة. تمثل هذه الظاهرة مصدر قلق كبير بسبب ارتباطها بنتائج سلبية للأم والجنين. يُعد فهم أسبابها وإدارتها أمرًا ضروريًا لتحسين الممارسات السريرية.

الهدف :يهدف هذا البحث إلى استكشاف أسباب الولادة غير الطبيعية وطرق تشخيصها واستراتيجيات إدارتها والتدخلات التمريضية ونتائجها على الأم والجنين.

المنهجية :أُجريت مراجعة شاملة للأدبيات ركزت على التقييمات السريرية، الفيزيولوجيا المرضية، وأساليب إدارة الولادة غير الطبيعية. تم تحليل البيانات الوبائية وعوامل الخطورة إلى جانب أدوات التشخيص والعلاج، بما في ذلك التدخلات الدوائية مثل الأوكسيتوسين.

النتائج :تُعزى الولادة غير الطبيعية غالبًا إلى مشاكل تتعلق بـ"العناصر الثلاثة" (القوة، الممر، والجنين)، وهي شائعة في 20% من حالات الولادة وتعد أحد الأسباب الرئيسية للولادة القيصرية. تشمل عوامل الخطر الرئيسية للأم العمر المتقدم، البكورة، والحوض غير المناسب للولادة، في حين تشمل العوامل الجنينية كبر حجم الجنين أو وضعيته غير الطبيعية. يعتمد التشخيص على المعايير الزمنية والفحوصات البدنية ومراقبة نشاط الرحم. تركز استراتيجيات الإدارة على النهج التحفظية مثل التدوير اليدوي للجنين وتعزيز الانقباضات الدوائية. تلعب التدخلات التمريضية دورًا محوريًا في مراقبة تقدم الولادة وضمان سلامة الأم والجنين.

الخلاصة :تمثل الولادة غير الطبيعية تفاعلاً معقدًا بين عوامل الأم والجنين، مما يتطلب نهجًا متعدد التخصصات. يُعد التشخيص المبكر، والإدارة القائمة على الأدلة، والرعاية التمريضية الفعّالة أساسية لتقليل المضاعفات وتحسين النتائج.

الكلمات المفتاحية :الولادة غير الطبيعية، عسر الولادة، نتائج الأم والجنين، التدخلات التمريضية، إدارة الولادة، نشاط الرحم، الأوكسيتوسين.