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Analysis of the Preventive Effects of Shoulder Dystocia Midwifery Techniques and Predictive Nursing on Shoulder Dystocia

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Abstract: *Objective*: To evaluate the preventive effect of shoulder dystocia midwifery techniques combined with predictive nursing on shoulder dystocia. *Methods*: A total of 82 high-risk pregnant women with shoulder dystocia admitted for childbirth from January 2022 to January 2025 were selected and equally divided using a random number table. The experimental group received shoulder dystocia midwifery techniques combined with predictive nursing, while the reference group received routine midwifery care. Indicators such as the preventive effect on shoulder dystocia were compared between the two groups. *Results*: The incidence of shoulder dystocia in the experimental group was lower than that in the reference group, the duration of labor was shorter, the amount of intra-partum bleeding was less, the incidence of adverse delivery outcomes was lower, and the score for fear of childbirth after intervention was lower than that in the reference group ($p < 0.05$). *Conclusion*: Implementing shoulder dystocia midwifery techniques combined with predictive nursing for high-risk pregnant women with shoulder dystocia can prevent shoulder dystocia and other adverse delivery outcomes, shorten the duration of labor, reduce intra-partum bleeding, and alleviate pregnant women's fear of childbirth, demonstrating high nursing value.

Keywords: Shoulder dystocia midwifery techniques; Predictive nursing; Shoulder dystocia; Preventive effect; Adverse delivery outcomes

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1. Introduction

Shoulder dystocia refers to a condition where, after the fetal head is delivered, the anterior shoulder of the fetus becomes impacted above the pubic symphysis, making it difficult to deliver the fetal shoulders smoothly using conventional midwifery methods [1]. This condition is characterized by its sudden onset and unpredictability, necessitating the use of shoulder dystocia midwifery techniques to expedite the delivery of the fetal shoulders, thereby preventing adverse events such as perineal laceration or postpartum hemorrhage and enhancing the safety of childbirth. Concurrently, it is essential to incorporate predictive nursing, which involves dynamically assessing changes in the pregnant woman's labor progress and flexibly implementing nursing interventions based on the

delivery situation to minimize the duration of labor and prevent childbirth accidents to the greatest extent possible. The combination of these two approaches takes into full consideration the individual circumstances of pregnant women, enhancing the specificity and timeliness of nursing services, and thus resulting in superior nursing quality [2]. Based on this, this study selected 82 high-risk pregnant women with shoulder dystocia to evaluate the significance of implementing shoulder dystocia midwifery techniques combined with predictive nursing.

2. Materials and methods

2.1. General information

Eighty-two high-risk pregnant women with shoulder dystocia who were admitted for childbirth between January 2022 and January 2025 were selected and equally divided using a random number table into an experimental group (41 cases) and a reference group (41 cases). In the experimental group, the women were aged 24 to 36 years, with a mean age of (28.68 ± 4.19) years; 31 were primiparous and 10 were multiparous; the gestational age ranged from 37 to 41 weeks, with a mean of (38.95 ± 1.15) weeks; the predicted fetal weight ranged from 2.9 to 4.0 kg, with a mean of (3.55 ± 0.78) kg. In the reference group, the women were aged 25 to 37 years, with a mean age of (28.91 ± 4.22) years; 32 were primiparous and 9 were multiparous; the gestational age ranged from 37 to 40 weeks, with a mean of (38.73 ± 1.18) weeks; the predicted fetal weight ranged from 2.8 to 4.1 kg, with a mean of (3.59 ± 0.72) kg. There were no significant differences in the data between the two groups ($p > 0.05$).

2.1.2. Inclusion criteria

Singleton term pregnancy; fetal head presentation; pregnant women aged ≤ 38 years; body mass index of pregnant women between 18 and 30 kg/m^2; normal pelvis; complete basic information; informed consent for the study.

2.1.3. Exclusion criteria

Presence of pregnancy complications; presence of gynecological diseases such as uterine fibroids; presence of indications for cesarean section; presence of mental illnesses; abnormal communication ability; withdrawal from the study midway.

2.2. Methods

The reference group received routine midwifery care: before childbirth, continuously monitor the vital signs of pregnant women, explain the cooperation methods during the childbirth process to them, and provide emotional support through verbal counseling and physical gestures. Strictly monitor changes in the labor process. If shoulder dystocia occurs, instruct the pregnant woman to flex her thighs to expand the anterior and posterior diameters of the pelvic outlet. The midwife continuously applies pressure above the symphysis pubis of the pregnant woman, while another midwife explores the fetal shoulder area, pulls the fetal head, and both apply force together to attempt to deliver the fetal shoulder. Alternatively, one midwife explores the posterior arm of the fetus inside the pregnant woman's vagina, determines the position of the elbow fossa, and applies appropriate pressure. After the posterior arm is delivered, rotate the fetal shoulder to the oblique diameter of the pregnant woman's pelvis, and then deliver the fetal shoulder.

The experimental group received shoulder dystocia midwifery techniques combined with predictive nursing:

2.2.1. Establish a nursing team

A nursing team is formed by the head nurse and senior midwives (with more than 6 years of work experience). Responsibility-based nursing is implemented, and 1–2 midwives are assigned to each pregnant woman from the time of admission to be responsible for the entire nursing process for that case. The head nurse is responsible for organizing collective training activities, with training content including pregnancy care, identification of shoulder dystocia, common midwifery techniques, and nursing cooperation for shoulder dystocia, to ensure that all nursing staff master the corresponding nursing skills.

2.2.2. Pregnancy guidance

Inform pregnant women to wear soft and loose clothing throughout pregnancy to improve comfort in daily life. Regularly record weight changes and engage in household chores, walking, or prenatal yoga to increase energy expenditure and prevent excessive fetal weight. However, it is necessary to balance work and rest, avoid overexertion, and ensure more than 8 hours of sleep per day to maintain sufficient energy. Explain the positive impact of a healthy mindset during pregnancy on fetal development and guide pregnant women to maintain an optimistic attitude and avoid extreme emotions. Encourage pregnant women to read psychology or parenting books to quickly transition their roles and reduce their psychological burden. In addition, inquire about the dietary preferences of pregnant women and develop a scientific diet plan for them, recommending the consumption of fresh fruits and vegetables, adhering to a high-protein, high-fiber, low-sugar, and low-fat diet, and appropriately supplementing calcium and iron according to their own conditions. If limb edema occurs during pregnancy, reduce salt intake to prevent water-sodium retention.

2.2.3. Childbirth intervention

After the pregnant woman enters the first stage of labor, the midwife assesses the uterine contraction status of the pregnant woman and administers medication as prescribed to relieve pain. At the same time, combine various physical pain relief methods such as the Lamaze breathing method to try to distract the pregnant woman's attention. The midwife accompanies the pregnant woman throughout the process, guiding her to take deep breaths and explaining the causes of pain during the first stage of labor to provide psychological counseling and reduce her psychological pressure. Entering the second stage of labor, continue to monitor changes in the pregnant woman's uterine contractions, enable the pregnant woman to master the method of using abdominal pressure to control the process of fetal head delivery, so that the fetal head is exposed by about 1 cm each time the pregnant woman exerts force. Avoid flexing the fetal head and do not intervene in the direction and angle of the fetal head. During childbirth, dynamically observe for the presence of the "turtle sign". If this sign appears, immediately carry out the following interventions:

(1) Call for help

Immediately call for clinical doctors and other midwives, as well as anesthesiologists and neonatal doctors;

(2) Perineotomy

Evaluate the length and elasticity of the pregnant woman's perineal body and use methods such as lateral episiotomy to appropriately expand the birth canal, which can assist in relieving the bony impaction above the symphysis pubis;

(3) Flex the thighs

Instruct the pregnant woman to flex her legs and bring them close to her abdomen while maintaining a hands-on-knees position. The above methods can reduce the pelvic inclination, straighten the anterior

concavity of the lumbosacral region, widen the sacrococcygeal joint while moving the sacrum backward, and thus relieve the anterior shoulder impaction.

(4) Suprapubic pressure

The midwife places her hand on the pregnant woman's symphysis pubis, using a technique consistent with cardiopulmonary resuscitation. Apply continuous or intermittent vibratory force in this area to adduct the fetal shoulders and reduce the distance between the biparietal diameters.

(5) Shoulder rotation method

Use the Rubin maneuver to rotate the fetal shoulders. The midwife slowly inserts her middle and index fingers into the pregnant woman's vagina, determines the position of the fetal anterior shoulder, and places her middle and index fingers on the dorsal side of the anterior shoulder to adduct it. Alternatively, combine the Woods and Rubin maneuvers. The midwife inserts one hand into the pregnant woman's vagina and places it on the dorsal side of the fetal anterior shoulder, while placing the other hand on the lateral side of the posterior shoulder's chest. Adduct the anterior shoulder while externally rotating the posterior shoulder to position the fetal shoulders on the oblique diameter of the pelvis. The midwives apply force together to deliver the fetal shoulders.

(6) Posterior arm and shoulder delivery method

The midwife inserts one hand along the pregnant woman's sacrum into the vagina, firmly grasps the fetal posterior upper limb, moderately flexes the fetal elbow joint to the chest, and uses the "reverse face-washing" method to deliver the posterior arm, and then assists in delivering the posterior shoulder. Do not grasp the fetal upper arm during the operation to prevent humeral fractures. After implementing the above operating methods, more than 95% of cases of shoulder dystocia can deliver the fetus within 4 minutes.

(7) All fours position

Help the pregnant woman turn over so that her chest is close to the bed, raise her buttocks as high as possible, open her legs, and have the pregnant woman exert force downward, which can reduce the difficulty of fetal delivery. If the fetal shoulder still cannot be delivered after performing each of the above steps for 30–60 seconds, promptly move to the next step. Each step can be repeated. After the fetus is delivered, immediately clear its respiratory tract, perform initial resuscitation and physical examination care, and observe for childbirth injuries such as clavicle fractures in the newborn. After entering the third stage of labor, continue to monitor the uterine contraction status of the pregnant woman, record the amount of vaginal bleeding, and provide professional guidance.

2.3. Observation indicators

(1) Incidence of shoulder dystocia

Observe the probability of the occurrence of shoulder dystocia.

(2) Labor duration and blood loss

Observe the duration of the first to third stages of labor and assess the amount of blood loss during childbirth.

(3) Adverse childbirth outcomes

Observe adverse outcomes in pregnant women such as perineal laceration, perineal edema, and postpartum hemorrhage, as well as adverse outcomes in newborns such as brachial plexus injury, neonatal asphyxia, and clavicle fracture.

(4) Fear of childbirth

Use the Childbirth Attitudes Questionnaire (CAQ), which includes fetal health, the hazards of labor pain, medical care, and self-control. Each dimension contains 4 items, with each item scored from 1 to 4, for a total of 64 points. Fear of childbirth is scored positively.

2.4. Statistical analysis

The data were processed using SPSS 28.0 software. Measurement values were compared using the *t*-test, and count values were compared using the chi-square test. A statistically significant result was considered when $p < 0.05$.

3. Results

3.1. Comparison of the incidence of shoulder dystocia between the two groups

The incidence of shoulder dystocia in the experimental group was 4.88% (2/41), while that in the reference group was 19.51% (8/41). There was a significant difference between the two groups ($\chi^2 = 4.100$, $p = 0.043$).

3.2. Comparison of labor duration and blood loss between the two groups

The labor duration in the experimental group was shorter than that in the reference group, and the amount of blood loss during childbirth in the experimental group was less than that in the reference group ($p < 0.05$). See **Table 1**.

Table 1. Comparison of labor duration and blood loss between the two groups ($\overline{x} \pm s$)

Group	No of cases	Labor duration (min)			Intrapartum blood loss (mL)
		First stage	Second stage	Third stage	
Experimental group	41	321.59 ± 18.74	45.33 ± 5.17	7.11 ± 1.58	84.28 ± 8.13
Control group	41	435.16 ± 24.95	53.82 ± 5.34	8.59 ± 1.63	118.75 ± 9.76
t		23.305	7.314	4.175	17.376
p		< 0.001	< 0.001	< 0.001	< 0.001

3.3. Comparison of adverse childbirth outcomes between the two groups

The incidence of adverse childbirth outcomes in the experimental group was lower than that in the reference group ($p < 0.05$). See **Table 2**.

Table 2. Comparison of adverse childbirth outcomes between the two groups [n/%]

Group	n	Maternal adverse outcomes				Neonatal adverse outcomes			
		Perineal laceration	Perineal edema	Postpartum hemorrhage	Incidence	Brachial plexus Injury	Neonatal asphyxia	Clavicular fracture	Incidence
Test group	41	1 (2.44)	1 (2.44)	1 (2.44)	7.32 (3/41)	1 (2.44)	0	0	2.44 (1/41)
Reference group	41	3 (7.32)	4 (9.76)	3 (7.32)	24.39 (10/41)	3 (7.32)	2 (4.88)	1 (2.44)	14.63 (6/41)
χ^2					4.479				3.905
p					0.034				0.048

3.4. Comparison of fear of childbirth scores between the two groups

The fear of childbirth score in the experimental group was lower than that in the reference group ($p < 0.05$). See **Table 3**.

Table 3. Comparison of fear of childbirth scores between the two groups ($\overline{x} \pm s$, points)

Group	Number of cases	Fetal health	Labor pain harm	Medical care	Self-control
Experimental group	41	9.25 ± 1.65	9.81 ± 1.76	8.15 ± 1.42	8.03 ± 1.55
Control group	41	11.17 ± 1.78	11.39 ± 1.89	10.06 ± 1.54	9.97 ± 1.58
t	-	5.065	3.917	5.838	5.612
p	-	< 0.001	< 0.001	< 0.001	< 0.001

4. Discussion

Shoulder dystocia is one of the obstetric complications that directly affects the safety of childbirth and can even lead to severe consequences such as postpartum hemorrhage or neonatal asphyxia [3]. Additionally, shoulder dystocia increases the risk of neonatal aspiration pneumonia, brachial plexus injury, and may result in abnormal neurodevelopment in newborns, thereby having a long-term impact on their cognitive and language functions. High-risk factors for shoulder dystocia include excessive neonatal birth weight, diabetes, maternal obesity, a history of shoulder dystocia, and abnormal labor progression. In response to these high-risk factors, prenatal ultrasound assessments should be conducted to accurately measure indicators such as femoral length and abdominal circumference, while also controlling blood glucose levels to manage fetal weight. Maternal weight gain during pregnancy should be managed, and regular screening for pregnancy complications should be performed to prevent excessive maternal obesity. In addition to these interventions, it is crucial to strengthen preventive nursing for shoulder dystocia, utilizing scientific and comprehensive nursing measures to reduce its incidence and improve maternal and neonatal outcomes [4,5].

Shoulder dystocia midwifery techniques represent a systematic approach that includes seven steps, allowing for flexible selection of midwifery methods based on the specific circumstances of the pregnant woman, thereby shortening the duration of labor and achieving high midwifery efficiency [6]. Concurrently, combining predictive nursing can focus on maternal health care during pregnancy, comprehensively assess risk factors for shoulder dystocia, and employ predictive measures to enhance the smoothness of childbirth, thereby preventing adverse events such as shoulder dystocia.

The results showed that the incidence of shoulder dystocia in the experimental group was lower than that in the reference group, the duration of labor was shorter, and the amount of intra-partum bleeding was less ($p < 0.05$). The reasons for this are as follows: Combined nursing can provide early interventions during pregnancy, such as dietary guidance and exercise care, and dynamically assess the maternal pelvic condition and changes in fetal weight, enabling pregnant women to prepare physically and mentally for childbirth, thereby enhancing their confidence in the delivery process [7]. During childbirth, midwives closely monitor early signs of shoulder dystocia, enabling timely and meticulous emergency management and standardized coordination with clinical doctors' midwifery procedures, thereby shortening the duration of labor and actively preventing shoulder dystocia [8]. The incidence of adverse delivery outcomes in the experimental group was lower than that in the reference group ($p < 0.05$). The reasons for this are as follows: Combined nursing can fully consider the physiological

and psychological characteristics of pregnant women, reducing the occurrence of childbirth accidents while strengthening nurse-patient communication, regularly inquiring about the pregnant women's delivery experiences, promptly identifying early signs of adverse delivery outcomes, and providing targeted interventions to ensure the smoothness of childbirth [9]. The score for fear of childbirth in the experimental group was lower than that in the reference group ($p < 0.05$). The reasons for this are as follows: Combined nursing can implement responsibility-based nursing during pregnancy, fostering closer nurse-patient relationships and enhancing pregnant women's trust and reliance on midwives, thereby improving their cooperation during childbirth. Furthermore, continuous nursing care can enhance maternal emotional stability, enabling them to fully understand the preventability and controllability of shoulder dystocia, thereby actively cooperating with midwifery procedures and reducing their fear of the childbirth process [10].

5. Conclusion

In conclusion, shoulder dystocia midwifery techniques combined with predictive nursing can reduce adverse delivery outcomes such as shoulder dystocia, enhance maternal and neonatal safety, shorten labor duration, prevent intra-partum and postpartum hemorrhage, and alleviate pregnant women's fear of childbirth, demonstrating high nursing scientificity.

Disclosure statement

The authors declare no conflict of interest.

References

[1] Shen Z, Wang T, Hu J, 2024, Application of Common Shoulder Dystocia Midwifery Techniques Combined with Nursing in Predictive Shoulder Dystocia. Smart Healthcare, 10(12): 177–180.

[2] Wang Y, 2022, Application Effect of Common Shoulder Dystocia Midwifery Techniques and Nursing Coordination in Predictive Shoulder Dystocia. Life Science Instruments, 20(z1): 460.

[3] Lin Y, 2021, Observation on the Clinical Nursing Effect of Lateral Position Delivery Combined with Unprotected Perineal Delivery Method. Journal of Medical Frontiers, 11(26): 126–127.

[4] Wang Y, 2024, Research on Clinical Characteristics and Treatment Methods of Shoulder Dystocia in Normal Childbirth. Journal of Rare and Uncommon Diseases, 31(4): 82–83.

[5] Cai Y, Zhai J, Feng B, 2021, Clinical Exploration of Modified Post-Delivery Shoulder Technique for Managing Shoulder Dystocia. China Journal of Medicine, 56(8): 885–887.

[6] Li J, Zhang Y, Li H, 2021, Research on High-Risk Factors, Risk Warning Indicators, and Clinical Treatment Methods of Shoulder Dystocia. Contemporary Nurse (Mid-Issue), 28(1): 16–17.

[7] Wu J, You A, Song Y, 2021, Clinical Study on the Improvement of Pelvic Floor Muscle Function in Postpartum Women with Shoulder Dystocia Treated by Pronation Shoulder Technique. Chinese Journal of Obstetrics & Gynecology and Pediatrics (Electronic Edition), 17(3): 355–359.

[8] You G, 2020, Application of Common Shoulder Dystocia Midwifery Techniques and Nursing Coordination in Predictive Shoulder Dystocia. China Health Care & Nutrition, 30(5): 179.

[9] Wang J, Fan Z, 2021, Discussion on Clinical Shoulder Dystocia in Parturients and Their Midwifery Nursing. China

Health Care & Nutrition, 31(4): 143.

[10] Zhang Y, 2021, Research on the Application of Modified Shoulder Delivery Technique in Parturients with Shoulder Dystocia. Practical Journal of Integrated Traditional Chinese and Western Medicine Clinical, 21(22): 83–84.