Contents lists available at IOCScience

Science Midwifery

journal homepage: www.midwifery.iocspublisher.org

Relationship between Mal Presentation, Contractions and Baby Weight with Prolonged Parturition in the Teluk Lubuk Health Center Working Area in 2020

[1]Indah Sari Dewi, [2]Helni Anggraini, [3]Titin Dewi Sartika Silaban

[1]Student of S1 Midwifery Study Program, Faculty of Midwifery and Nursing,
[2,3]Faculty of Midwifery and Nursing,
[123]Universitas Kader Bangsa Palembang, Indonesia

ARTICLEINFO

Keywords:

Mal Presentation,
Contractions,
Baby's Weight

ABSTRACT

Background: The incidence of prolonged labor is the 3rd cause of maternal mortality in Indonesia. The incidence of prolonged labor in 2007 and 2012 remains the same, namely 5%. Prolonged labor can cause complications for the mother and fetus. Factors that affect prolonged labor include maternal factors, fetal factors, and birth canal factors. Based on a preliminary survey in the Lubuk Bay Health Center Working Area in 2020, there were 435 deliveries where it was known that there were 58 cases of delivery referrals of which 28 cases were due to prolonged labor, 13 cases of post-term pregnancy, 17 cases of Pre-eclampsia and other causes. The purpose of this study was to determine the relationship between mal presentation, contraction and infant weight with the incidence of prolonged labor in the Teluk Lubuk Health Center Work Area in 2020. This type of research was analytic using a cross-sectional design. This research will be conducted in August 2021. The population in this study were all mothers who gave birth in January-December 2020. The sample was taken by purposive sampling technique. This research data uses secondary data. The results of univariate analysis are known to be more than half (51.8%) with an abnormal presentation. more than half of respondents with abnormal contractions (50.4%). more than half (61.3%) the weight of the baby is at risk. more than half (51.8%) of mothers with prolonged labor. From the results of the chi-square test, there is a relationship between malpresentation and prolonged labor, it is obtained that P value = 0.000. there is a relationship between contractions and prolonged labor, the P value = 0.005. the weight of infants with prolonged labor obtained P value = 0.001. So it is recommended to improve the quality of services, especially health services for pregnant women by running an integrated ANC program with quality.

E-mail:
indhsrdwi@gmail.com

1. Introduction

Labor is a process in which a woman gives birth to a baby which begins with regular uterine contractions and peaks at the time of expulsion of the baby to the expulsion of the placenta and its membranes where this labor process will last for 12 to 14 hours [1].

According to Mochtar.R (2013) labor or called parturition is a process of expelling the products of conception that can live from the uterus through the vagina to the outside world [2].

Many factors affect the mode of delivery, which can be divided into several factors. Biological maternal factors are maternal age, parity, gestational distance, height (< 145 cm), birth canal abnormalities (passage). Other maternal factors include nutritional status/BMI, anemia, blood pressure, bad obstetric history, co-morbidities, delivery complications. This plays a role in strength during labor (power). Infant factors (passager) include fetal weight, fetal position and fetal abnormalities (Risnawati, 2020) [3].

The biggest cause of maternal death in 2012 remained the same compared to 2007 namely bleeding (32%), followed by hypertension (25%), prolonged labor (5%), infection (5%), abortion (1%) and other causes 32% .

The incidence of prolonged labor is the 3rd cause of maternal mortality in Indonesia. The incidence of prolonged labor in 2007 and 2012 is still the same at 5% (IDHS, 2012) [4].

Maternal Mortality Rate (MMR) is one indicator to see the success of maternal health efforts. AKI is the ratio of maternal deaths during pregnancy, childbirth and the puerperium caused by pregnancy, childbirth and the postpartum period or its management but not due to other causes such as accidents or incidents in every 100,000 live births. In addition to assessing maternal health programs, this indicator is also able to assess the degree of public health, because of its sensitivity to improving health services, both in terms of accessibility and quality. In general, there was a decrease in maternal mortality during the period 1991-2015 from 390 to 305 per 100,000 live births. Although there is a tendency to decrease the maternal mortality rate, it has not succeeded in achieving the MDGs target that must be achieved, which is 102 per 100.

The target for reducing MMR is determined through three models of Annual Average Reduction Rate (ARR) or the average reduction in maternal mortality from the three models. The Ministry of Health uses the second model with an average decline of 5.5% per year as a performance target. Based on this model, it is estimated that in 2024 the MMR in Indonesia will decrease to 183/100,000 live births and in 2030 it will decrease to 131 per 100,000 live births (Indonesian Health Profile, 2020) [5].

World Health Organization (WHO) reported that every day in 2017, around 810 women died from preventable problems or complications of pregnancy and childbirth. One of the complications in childbirth is prolonged labor, analysis of World Health Organization data shows that in 2017 prolonged labor was the direct cause of childbirth complications with an incidence of 69,000 or 2.8% of deaths from all maternal deaths worldwide (WHO, 2017) [6].

Long labor can have an impact on both mother and baby. The dangers posed to the mother are intrauterine infection (infection of the chorionic membrane and amniotic fluid caused by bacteria), postpartum hemorrhage, post-partum infection, trauma and injuries to the mother's birth canal such as cervical tears and vaginal wall tears. For the fetus, prolonged labor can cause fetal distress due to lack of oxygen, intracranial bleeding (bleeding within the skull), increased use of forceps or vacuum extractors, sepsis (complications due to infection), and the long-term risk of the baby experiencing permanent injuries such as cerebral palsy (Fig. cerebral palsy), hypoxic-ischemic encephalopathy (HIE), which is a clinical syndrome with impaired neurological function, as well as seizure disorders (Ehsanipoor and Satin, 2019) [7]

Factors that affect prolonged labor include maternal factors, fetal factors, and birth canal factors. Maternal factors include age, his, premature rupture of membranes, and parity. Fetal factors include attitude, location, position abnormalities, and large fetus while birth canal factors such as tumors in the pelvis, narrow pelvis, abnormalities in the vagina and cervix [8]. Based on research conducted by Evy Soviyati (2015) stated that there were 65.4% of mothers experiencing labor duration of more than 18 hours with malposition while 60.7% of mothers experiencing labor duration of more than 18 hours experiencing normal position. Odd Ratio analysis of 1.2 means that mothers who experience malposition during childbirth are at risk of 1.2 times greater experiencing prolonged labor [9].

Another study conducted by Fauziyatun Nisa (2015) found that there was a relationship between characteristic uterine contractions and the length of the second period in the private practice of the Sahabat Wanita Gunung Anyar midwife in Surabaya [10].

Meanwhile, the research conducted by Ruqaiyah (2019) at the AL Jala Ammari Hospital, Makassar, found that there was a relationship between the birth weight of the baby and the incidence of prolonged labor. The weight of babies who are not at risk of experiencing prolonged labor are 3 people and those who do not experience prolonged labor are 49 people. One of the causes of the baby's weight that is not at risk for prolonged labor is his abnormality, fetal position, and based on the mother's age being too young or too old [11].

Based on a preliminary survey in the Lubuk Bay Health Center Working Area in 2020, there were 435 deliveries where it was known that there were 58 cases of labor referrals of which 28 cases were due to prolonged labor, 13 cases of post-term pregnancy, 17 cases of pre-eclampsia and other causes.

Based on the explanation above, the researcher is interested in conducting research on the relationship between mal presentation, contractions and baby weight with the incidence of prolonged labor in the Teluk Lubuk Health Center Working Area in 2020.

2. Method

This study uses analytical quantitative research using a cross-sectional research design performed on January-December 2020, the sample of this research is some mothers gave birth in the Teluk Lubuk Health Center Work Area, the number of samples in this study was 137 people.

Contents lists available at IOCScience

Science Midwifery

journal homepage: www.midwifery.iocspublisher.org

3. Results and Discussion

3.1 Research result

a. Univariate Analysis

Table 1

Frequency Distribution Mall presentation in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

Malpresentation	F	%
Normal	66	48.2
Abnormal	71	51.8
Tbrain	137	100

Berbased on table 1, it was found that normal malpresentations were 66 people (48.2%) less than abnormal as many as 71 people (51.8%)

Table 2

Distribution of Contraction Frequency in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

Contraction	F	%
Normal	68	49.6
Not	69	50.4
Tbrain	137	100

BerBased on table 2, it was found that more than half of the respondents had abnormal contractions (50.4%).

Table 3

Frequency Distribution of Infant Weight in Working Area of Teluk Lubuk Sub-district Health Center Starfruit in Muara Enim Regency in 2021

Baby Weight	F	%
at risk	84	61.3
No Risk	53	38.7
Tbrain	137	100

BerBased on table 3, it was found that more than half (61.3%) of the baby's weight were at risk.

Table 4

Frequency Distribution of Old Parturition in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

Old Parturition	F	%
Yes	71	51.8
Not	66	48.2
Tbrain	137	100

Based on table 4 it was found that more than half (51.8%) of mothers with prolonged labor.

b. Bivariate Analysis

Table 5

Relationship of Malpresentation with Old Parturition in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

No	Malpresentation	Old Parturition						*p Valu*	*OR*
		Yes		Not		Tbrain			
		n	%	N	%	n	%		
1.	Normal	24	33.8	42	63.6	66	100	0.000	589
2.	Abnormal	47	66.2	24	36.4	71	100		
	Total	71	-	66	-	*137*	-		

PaFrom table 5 above, it can be concluded that there were 24 people (33.8%) normal who experienced prolonged labor and 42 people (63.6%). While abnormal malpresentations experienced long labor as many as 47 people (66.2%) and not long labor as many as 24 people (36.4%).

Table 6

Contraction Relationship with Old Parturition in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

No	Contraction	Old Parturition				Tbrain		*p*-Value	OR
		Yes		Not					
		n	%	n	%	n	%		
1.	Yes	27	38	41	62.1	68	100	0.005	746
2.	Not	44	62	25	37.9	69	100		
	Tbrain	71	-	66	-	*137*	-		

In table 6 above, it can be concluded that the normal contractions experienced by prolonged labor were 27 people (38%) and 41 people did not have prolonged labor (62.1%). While the abnormal contractions experienced prolonged labor as many as 44 people (62%) and not prolonged labor as many as 25 people (37.9%).

Table 7

Relationship between Baby Weight and Prolonged Parturition in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

No	Baby Weight	Old Parturition				Tbrain		*p*- Value	OR
		Yes		Not					
		n	%	n	%	n	%		
1.	at risk	53	74.6	31	47	84	100	0.001	6,835
2.	No Risk	18	25.4	35	53	53	100		
	Tbrain	71	-	66	-	*137*	-		

In table 7 above, it can be concluded that the weight of babies at risk who experienced prolonged labor were 53 people (74.6%) and 31 people (47%). While the weight of babies who are not at risk of experiencing prolonged labor are 18 people (25.4%) and 35 people who don't have prolonged labor (53%).

3.2 Discussion

a. Relationship of Malpresentation with Old Parturition in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

From the univariate analysis, it was found that more than half (51.8%) had abnormal presentations.

According to the researchers, more than half of the malpresentations in this study were due to the parity of the mother who was at risk for disturbances in pregnancy.

According to Oxorn (2010) malpresentation is the lowest part of the fetus that is in the lower uterine segment, not the back of the head. Malposition is a pointer (small fontanelle) is not located anteriorly so that the part of the fetus or the diameter of the head that passes through the pelvic cavity becomes larger. This situation is influenced by several factors including maternal parity, placenta previa, prematurity polyhydramnios and a previous history of breech presentation [12].

The presenting part is the part of the fetal body that is first felt by the examiner's finger during an internal examination. The factors that determine the presenting part are the position of the fetus, the position of the fetus and the extension or flexion of the fetal head [13].

In a study conducted by Evy Soviyati stated that there were 65.4% of mothers experiencing labor duration of more than 18 hours with malpresentation / malposition while 60.7% of mothers experiencing labor duration of more than 18 hours experiencing normal position. Odd Ratio analysis of 1.2 means that mothers who experience malposition during childbirth are 1.2 times more likely to experience prolonged labor [9].

Meanwhile, based on research conducted by Amelia (2018) in the Obstetrics Room of RSud Ibnu Sutowo Baturaja there is a relationship between fetal presentation and the incidence of prolonged labor (p value 0.001) [14].

According to Manuaba (2012) malpresentation is related to maternal and fetal factors that interfere with the process of fetal movement in the uterus. The position of the fetus before the 22nd week of pregnancy is generally still changing. However, with advancing gestational age, most fetuses will enter a cephalic presentation. If there are factors that interfere with fetal movement, malpresentation can occur [15].

Contents lists available at IOCScience

Science Midwifery

journal homepage: www.midwifery.iocspublisher.org

Meanwhile, according to Lamen (2019), an abnormal attitude will cause malpresentation of the fetus and labor difficulties. Light extension is a cephalic presentation (with a large fontanel pointer), moderate extension is a forehead presentation (with a snout pointer), and maximal extension is a facial presentation (with a chin pointer). If the fetus is in a malpresentation and malposition, prolonged or even obstructed labor may occur [16].

b. Contraction Relationship with Old Parturition in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

In this study, from the results of univariate analysis, it was concluded that more than half of the respondents had abnormal contractions (50,4%).

According to the researchers in this study, more than half of those with abnormal contractions due to parity and age played a greater role in every complaint experienced by mothers during pregnancy or childbirth.

The results are different from the research conducted by Ardhiyanti (2016) "Maternal Factors Associated with the Occurrence of Long Labor at the Arifin Achmad Hospital Pekanbaru at the Arifin Achmad Hospital Pekanbaru" found that there were 13 people who were at risk (27%) and 35 people were not at risk (63%) [17].

According to the researchers, an abnormal hist will cause labor to become obstructed, especially a weak and inadequate his.

According to Kuswanti (2014), his is a contraction of the uterine muscles in labor. His characteristics are good and perfect, namely: symmetrical contractions, dominant fundus (the highest strength is in the uterine fundus), the strength is like a squeezing motion of the uterus, after a contraction is followed by relaxation and at each his causes changes in the cervix, namely thinning and open [18].

In accordance with Inda (2013) His that arises is weak, short, and infrequent, it will affect the descent of the head and cervical opening or what is often referred to as incoordination of uterine muscle contractions, where this condition of incoordination of uterine muscle contractions can cause difficulty in uterine muscle strength to increase. opening or expulsion of the fetus from the uterus, in the end the mother will experience prolonged labor because there is no progress in labor with abnormal his indicators both in strength and nature so that it hampers the labor process causing stalled labor or prolonged labor[19].

In accordance with Riastawaty (2016) one of the causes of prolonged labor is contractions. Based on the results of the study, it was found that maternityexperiencing prolonged labor was higher due to those who experienced inefficient contractions compared to those who experienced efficient contractions. This is because mothers giving birth with inefficient contractions are at a higher risk because it can cause the inability of the cervix to open smoothly and quickly so that it does not cause progress of labor compared to women who give birth with efficient contractions which can lead to progress of labor [20].

c. Relationship between Baby Weight and Prolonged Parturition in Working Area of Teluk Lubuk Health Center, Belimbing District, Muara Enim Regency in 2021

From the results of the analysis, it was found that more than half (61.3%) of the baby's weight were at risk. According to the researcher, the baby's weight at risk in this study occurs because the fulfillment of nutrition during pregnancy in this respondent is well fulfilled, the mother often consumes supplements and consumes foods high in calories and protein, thus making the baby's weight large.

According to the Institute of Medicine in Khaula Karima (2012) Maternal weight gain during pregnancy directly affects birth weight and is influenced by various factors, including pre-pregnant nutritional status and sociodemographic factors [21].

Meanwhile, according to Servasius in Amelia (2018), a large neonate weighs if the fetal weight exceeds 4000 grams. In large fetuses, heredity plays an important role. In addition, large fetuses are also found in pregnant women with diabetes mellitus, postmaturity, and grande multipara [14].

Ruqaiyah's research (2019) at the AL Jala Ammari Makassar Hospital found that there was a relationship between birth weight and the incidence of prolonged labor. The weight of babies who are not at risk of experiencing prolonged labor are 3 people and those who do not experience prolonged labor are 49 people. One of the causes of the baby's weight that is not at risk for prolonged labor is his abnormality, fetal position, and based on the mother's age being too young or too old [11].

In line with Noya (2018), a fetus with excess weight in the womb can cause interference with the delivery process, such as blood loss, torn perineum, or damaged tailbone. Although rare, large babies can also experience dystocia or the baby's shoulder gets caught in the genitals during delivery, which can cause the baby's collarbone to fracture.[22].

4. Conclusion

There is a simultaneous relationship between mal presentation, contraction and baby weight with the incidence of prolonged labor in the Teluk Lubuk Health Center Working Area in 2020.

References

Kurniarum, Ari. 2016.Asuhan Kebidanan Persalinan dan Bayi Baru Lahir. Jakarta Selatan : Pusdik SDM Kesehatan.

Mochtar R. (2013). SINOPSIS OBSTETRI. Edisi kedua, cetakan pertama, EGC, Jakarta.

RIsnawati, Ni kadek (2020) Gambaran Jenis Persalinan Pada Ibu Bersalin Dengan Corona Virus Disease 19 Di Rumah Sakit Umum Daerah Wangaya Denpasar. Poltekes Denpasar

Badan Kependudukan dan Keluarga Berencana Nasional, Badan Pusat Statistik, Kementerian Kesehatan RI, dan ICF International. (2013). Survei Demografi Kesehatan Indonesia (SDKI). Jakarta: BKKBN, BPS, Kementerian Kesehatan, dan ICF International

Kemekes RI (2020). Profil Kesehatan Indonesia 2020. Jakarta: Kementrian Kesehatan Indonesia

WHO. World Health Statistics 2017 : Monitoring Health for The SDGs. World Health Organization. 2017

Ehsanipoor, R. M., & Satin, A. J. 2019, Normal and Abnormal Labor Progression

Prawirohardjo, S. (2014). Ilmu Kebidanan. PT. Bina Pustaka

Soviyati, Evi. (2016). Faktor-Faktor Yang Berhubungan Dengan Lama Persalinan Di Rsud∂45 Kuningan Jawa Barat Tahun 2015. Jurnal Bidan Vol2 No 1

Nisa, Fauziyatun. (2015). Pengaruh Karakteristik His Dengan Lama Persalinankala Ii Di Bps Sahabat Perempuan Gunung Anyar Surabaya. Jurnal Ilmiah Kesehatan, Vol. 8, No. 2 Hal175-183

Ruqaiyah, Asrianingsih D, Yustika Yusu St. (2019). Faktor yang Berhubungan Terhadap Kejadian Partus Lama di Rumah Sakit AL Jala Ammari Makassar. Jurnal KesehatanDelima PelamoniaVol 3,No.2,

Oxorn H, Forte WR. (2010). Ilmu Kebidanan : Patologi dan Fisiologi Persalinan. Yogyakarta : Yayasan Essentia Medica

Mutmainah A, Johan H, Llyod SS. (2017). Asuhan Persalinan Normal dan Bayi Baru Lahir. Yogyakarta : Andi offset

Amelia, Wahyu. (2018). Faktor - Faktor Yang Mempengaruhi Kejadian Partus Lama Di Ruang Kebidanan Rsud Ibnu Sutowo Baturaja Tahun 2018. Jurnal Kesehatan Abdurahman Palembang Vol 8

Manuaba, IBG. (2014). Penyakit Kandungan dan KB Untuk Pendidikan Bidan Ilmu Kebidanan. Jakarta : EGC

Lamen Kl, Yani W, Hesti W. (2019). Hubungan Ketuban Pecah Dini Dengan Kejadian Partus Lama Di Rsud Wates Tahun 2016-2018. Jurnal Kebidanan. Vol 4 No3, PP 12 – 55

Ardhiyanti Y, Susanti S. (2016). Faktor Ibu yang Berhubungan dengan Kejadian Persalinan Lama di RSUD Arifin Achmad Pekanbaru. Jurnal Kesehatan Komunitas, Vol. 3, No. 2 PP 83 – 87

Kuswanti, Ina .2014. Asuhan Kebidanan. Jogjakarta : Pustaka Pelajar

Inda P, Ginting AB. (2013). Hubungan Power, Penolong, Hb Dengan Kejadian Partus Lama Di Puskesmas Welamosa Tahun 2013. Jurnal Kesehatan Stikes Yima

Riastawaty D, Bella. (2016). Hubungan Ketuban Pecah Dini Dan Kontraksi Dengan Kejadian Partus Lama Pada Ibu Bersalin Di Rumah Sakit Umum Raden Mattaher Kota Jambi Tahun 2016. Scientia Jurnal Stikes Prima Jambi vol 5 no 02 PP 187 - 192

Khaula Karima , 2012. Status Gizi Ibu dan Berat badan Lahir Bayi, Jurnal Kesehatan Masyarakat Nasional Vol. 7, No. 3, Oktober 2012

Benedicto Ieuan Noya, A. (2018). Pentingnya Inisiasi Menyusui Dini untuk Kesehatan Bayi.