

ICASH-A033

CORRELATION BETWEEN PARITY AND PLACENTAL RETENTION INCIDENCE AT DR. SOEWANDHIE HOSPITAL, SURABAYA, INDONESIA

Diana Mufidati^{1,*}, Umdatus Soleha²

- 1) *Postgraduate Applied Science Program in Midwifery, Poltekkes Kemenkes Semarang, Semarang, Indonesia,*
- 2) *Nahdlatul Ulama University, Surabaya, East Java, Indonesia*

*Corresponding author's email: andrimufidati@gmail.com

ABSTRACT

Background: The incidence rate of placental retention at Dr. Soewandhie Hospital Surabaya in January – April 2014 with the total labor involving 669 mothers, 28 laboring mothers (4.19%) experience placental retention. It can cause postpartum hemorrhage which becomes the leading cause to death.

Aims: The purpose of this study was to find out the correlation between parity and the incidence of placental retention at Dr. Soewandhie Hospital Surabaya, Indonesia.

Methods: The design of study was analytic-cross sectional. The population involved all laboring mothers in April 2014, totally 205 laboring mothers, in which 136 laboring mothers were taken as the samples by simple random technique. The data was secondary data from labor registration book. Then, the data was analyzed using Chi-Square test with the significance level $\alpha = 0.05$.

Results: The result of study showed that, 14.2% of the primiparous experienced placental retention, whilst multiparous and grand multiparous have higher proportion, reached to 42.9%. By the statistical analysis, we found that the correlation between parity and incidence of placental retention among the laboring mothers at Dr. Soewandhie Hospital Surabaya, Indonesia, was significant (p value = 0,008).

Conclusion: It can be concluded that the more parity, the higher the risk of placental retention. It shows in urgency at Dr. Soewandhie Hospital Surabaya to provide counseling and education about the ideal number of children and increasing acceptance of family planning.

Key words: Parity, Placental Retention, Postpartum Hemorrhage

INTRODUCTION

The high maternal mortality rate is a major problem in the health sector. Maternal mortality is one indicator used to measure the health status of a country. More than 88% of maternal deaths are due to frequent complications at the time of delivery [1, 2]. Placental retention is an unborn placenta half an hour after birth. Placental retention is the cause of most cases of postpartum hemorrhage, whereas postpartum hemorrhage is the leading cause of maternal mortality in Indonesia. Based on the causes of bleeding, the distribution of uterine atony is obtained; 50-60%, residual placenta; 23-24%, placental retention; 16-17%, labor by laceration of the birth canal; 4-5% and blood disorders; 0.5-0.8%. Placental retention is potentially life-threatening, not only because of its retention but also because it is associated with bleeding and infection due to placental retention complications [3, 4]. The incidence of placental retention is affected by parity, age, functional factors and pathology. Placental retention is more likely to occur in high parity, is multiparous mother [5, 6].

According to Indonesia Demographic and Health Survey (SDKI) in 2012 Maternal Mortality Rate in Indonesia amounted to 359 / 100,000 live births. In East Java, maternal mortality (MMR) in 2012 was recorded at 97.43 / 100,000 live births. With the cause of death, 25.09% maternal mortality caused by bleeding, preeclampsia or eclampsia amounted to 34.71%, infection 4.98%, heart 8.25%, others 26.98%. [7]

Based on preliminary study conducted at Dr. Soewandhie Hospital Surabaya during the last 4 months (January - April 2014) total of 669 maternal deliveries, amounting to 28 (4.19%) of maternal mother with placental retention. From the number of incidents of placental retention in Dr. Soewandhie Surabaya for the last 4 months (January - April 2014) is classified in the parity group, where the incidence of placental retention occurs in multiparous women.

Placental retention is caused by a variety of factors including: multiparous with close child spacing, old primigravida, and former intra-uterine infection [8, 9]. According to cause by placenta previa, former Caesarea section, former curettage, history of placental retention in previous labor and parity. Placental retention is also caused by uterine atony and placental factors such as placental implantation such as placenta adhesive, placenta accrete placenta increta and placenta percreta [4, 5, 10].

The cause placental retention divided into 2 groups is the functional and cause of anatomic pathology. Including functional causes may occur due to his lack of strength (main cause) or placenta is difficult to escape because of extraordinary shape such as membrane of placenta, anularis of placenta. It could also be because the size of the placenta is very small. In the cause of anatomic pathology including placenta accrete. [4, 5, 8]

At high parity, the uterus loses its extension so that the myometrium cannot contract and retraction to the maximum resulting in uterine atony. This causes the placenta cannot be separated from the place of implantation or placenta has been released but not yet out because of atonic uteri [1, 4]. Retention of the placenta is a serious complication of labor, because in a short time the mother can experience postpartum hemorrhage and this can also cause the mother to fall in a state of shock. In addition, placental retention may pose an infection hazard because as an inanimate object, incarcerated placenta, placental polyps and malignant degeneration of choric carcinoma even death [6, 9, 11].

Efforts made in reducing the incidence of retention of the placenta, among others, by increasing the acceptance of family planning so that minimize the occurrence of retention of the placenta, increase acceptance of delivery assistance by trained health personnel, during the time of active management of the third stage rightt is not allowed to perform massage with the aim of accelerating placental delivery. Inappropriate masses can disrupt uterine muscle contractions and disrupt the release of the placenta [9]. In addition to the improvement of emergency services, providing counseling about high risk pregnant women to the community, as well as improving skills of health workers (midwives) in performing normal childbirth care [12].

Based on the above background and the number of factors affecting the incidence of placental retention, among others: placenta previa, former caesarean section, former curettage, history of placental retention in previous labor, parity, age, gravidity, former intra-uterine infections [4, 8, 9]. The authors just want to know the correlation parity and the incidence placental retention at Dr. Soewandhie Hospital Surabaya .

METHODS

This research is analytic survey with cross-sectional approach. This study aimed to study the relationship between parity and the incidence of placental retention at Dr. Soewandhie Hospital Surabaya. The population in this study was all maternal mothers in April 2014 in Dr. Soewandhie Hospital Surabaya counted for 205 mothers. Sample in this research obtained by simple random sampling that is as much as 136 maternity mothers. The procedure of taking data using secondary data that is from medical record.

After the data collected and then the data processed using computerized with SPSS program using *Chi-Square* test to find the presence of correlation between parity and the incidence of placental retention in maternal mothers in Dr. Soewandhie Hospital Surabaya .

RESULTS

Age, Parity and placental retention in the respondents

Table 1. Distribution of frequency Age, parity and placental retention of respondents

Variabels	Frequency	Percentage (%)
Age		
< 20 years old	9	6.6
20-35 years old	103	75.7
>35 years old	24	17.7
Total	136	100
Parity		
Primiparous	54	39.7
Multiparous	78	57.4
Grand multiparous	4	2.9
Total	136	100
Placental Retention		
No	129	94.8
Yes	7	5.2
Total	136	100

Based on the table 1 show that out of 136 respondent, the majority of respondent (75.7%) had 20 years old, the majority of respondents (57.4%) had multiparous and the majority of respondents (94.8%) had no placental retention.

Based on the analysis is results table 1 shows that out of 136 respondents, the majority of respondents (75,74%) had 20-35 years old, the majority of respondents (57,35%) had multiparous and the majority of respondents (94,85%) had no placental retention.

Table 2. Distribution Correlation Between the parity and the incidence of placental retention at Dr. Soewandhie Hospital Surabaya

Parity	Placental Retention		Total N%	P Value
	No N%	Yes N%		
Primiparous	53 (41,09)	1 (14,28)	54 (39,71)	0,008
Multiparous	75 (58,14)	3 (42,86)	78 (57,35)	
Grande multiparous	1 (0,77)	3 (42,86)	4 (2,94)	
Total	129 (100)	7 (100)	136 (100)	

Among primiparous (14.2%) experienced placental retention, whilst multiparous and grand multiparous have higher proportion (42.9%). Statistical test results obtained p value = 0.000 ($p \leq 0.05$), it can be concluded that there is a significant relationship between parity with incidence of placental retention.

Based on table above, the statistical test of Mann-Whitney test shows that $p = 0,008 < \alpha = 0,05$ so H_0 is rejected means there is relationship between parity with incidence of placental retention in maternity mother in Dr. Soewandhie Hospital Surabaya.

DISCUSSION

Maternal parity based on table 1 shows that of 136 respondents (57.35%) are multiparous. This may be the case because it still attaches the local culture such as the rejection of the use of family planning. Cultural background in decision making to have a child is in the husband it is in line with research results Assalis said that cultural factors in the community some people do not recommend to follow the family program, and lack of husband support to the wife to use family planning. Cultural backgrounds can affect parity. Universal culture is the universal elements of culture, such as customs. Without realizing it, culture has embedded a line of influence on various issues. Cultural backgrounds that affect parity include the assumption that the use of family planning is an attitude of rejection of the sustenance that has been given by God [13]. Because society considers that the more the number of children, the more fortune. So people refuse to use family planning for fear of sustenance a little [13, 14].

Parity of more than four has a great risk of occurrence placental retention due to multiparous of uterine muscles often stretched so that the walls are thinning and the contractions become weaker. Risk for the occurrence of placental retention will be 4 times greater in that the parity is greater than or equal to 4 where the incidence is 2.7%. The great parity of the effect on the incidence of placental retention in the mother Maternity, especially high parity. States that Mothers who have given birth 5 (five) times or more, have a uterus Stretched too much to create many risky spaces Abnormalities occur in the placenta [1, 6].

Parity is influenced by several factors, one of which is the mother's age. The age of 20-35 years is a safe and appropriate time to perform the function of pregnancy and childbirth because in reproductive age a woman's reproductive health is still in a healthy condition and is the peak of fertility for a woman. In addition both the physical and reproductive organs of a woman have reached the optimal function and the reproductive organs are mature so it is very safe for pregnancy and childbirth because the reproductive organs are able to function maximally [1, 6, 15].

Based on table 2 it can be concluded that from 136 respondents almost entirely 129 respondents did not occur retention of placenta. This is possible because the physiological separation mechanism runs without failure. Placental separation mechanisms are influenced by many factors, one of which is the placental implantation site. One of the causes of placental retention is from placental implantation of which is the placenta adhesive is strong implantation of the placental causing failure of the physiological separation mechanism. Placental accrete is implantation of the placental to enter some layer Myometrium. Inkreta of placenta is implantation of the placenta of placenta penetrating the muscle layer until it reaches the serous layer of the uterine wall. Precreta of placenta is implantation of the placental chorionic of the placenta through the serous lining of the uterine wall to the peritoneum. Inkarcerata of placenta is retention of the placenta in the uterine cavity caused by the uteri that closes [4, 5].

After analyzing the data with *Chi-Square* statistical test obtained $p=0,008 < \alpha = 0,05$ it means there is a relationship between parity with incidence of placental retention in maternity mothers in Dr. Soewandhie Hospital Surabaya. Based on table 2 it can be concluded that from 7 respondents who had retention of placenta almost half (42, 86%) happened at Grand multiparous and almost half (42, 86%) happened to multiparous. While from 129 respondents who did not experience retention of placenta mostly (58, 14%) happened to multiparous.

Theoretically parity is a risk factor for placental retention where in multiparous and Grande multiparous placenta retention is common. Incidence of placenta retention is common in Grande multiparousa mother because the higher the parity of the mother the less good the reproduction function. This is because the uterine muscle that has been weakened because the mother has given birth > 4 times so it is not good for placental implantation is associated with placental implantation in the form of placenta adhesive, placenta accrete, placenta increta and “perkreta” placenta. It is this implantation that causes retained placenta or placenta cannot be born half an hour after birth [1, 5, 11].

In multiparous and Grande multiparous there will be a decline and defect in the endometrium resulting in fibrosis in the former placental implantation in previous labor, resulting in reduced vascularization. To meet the nutritional needs of the fetus, the placenta will hold an implantation extension and the chorionic villi will penetrate the uterine wall even more so that placenta adhesive will occur until the “akreta” placenta. In addition, in multiparous and Grande multiparous there is a decrease in uterine elasticity so that the myometrium cannot contract and retraction with maximum resulting in retention placenta. The highest incidence of placental retention in multiparous and 4-5 parity (Grand multiparous) [1, 6, 9].

Primiparous are low-risk parity of placental retention, whereas multiparous and Grande multiparous are at high risk for placental retention. However, primiparous do not rule out complications of placental retention at delivery. This is because labor with placental retention is not only affected by parity. Several factors that cause placenta retention are Placenta previa, former Caesarean section, former curettage, and history of placental retention in previous labor, age, gravidity, former intra-uterine infections [1, 6].

This research proves that there is a similarity between the theory and the results of research that the higher the parity increase the risk of placental retention where the incidence of placental retention occurs in multiparous parity and Grande multiparous. It is therefore necessary to plan pregnancy and childbirth. In this case the role of midwife in dealing with high risk pregnancy should help delivery done in hospital. The prevention of complicated retention of placenta placentas done Ante Natal Care (ANC) is comprehensive and qualified and delivery help is done according to the standard of Normal Birth Attendance (APN) in the hope that the incidence of retention of placenta can be minimized [11, 16].

CONCLUSION

Based on the results of research conducted on maternity mothers in Dr. Soewandhie Hospital Surabaya, it can be there is a correlation between parity with the incidence of placental retention in maternal mothers in Dr. Soewandhie Hospital Surabaya. Therefore, Health workers can provide counseling and education about the ideal number of children and increasing acceptance of family planning.

REFERENCES

1. Anasari T, Khotijah A. Hubungan Usia Dan Paritas Dengan Kejadian Retensio Plasenta Pada Ibu Bersalin. *Jurnal Bidan Prada*. 2014;5(1).
2. Jekti RP, Suarthana E. Risk Factors Of Post Partum Haemorrhage In Indonesia. *Health Science Journal Of Indonesia*. 2011;2(2 Des):66-70.
3. Prahardina V. Hubungan Antara Perdarahan Postpartum Dengan Paritas Di RSUD Sukoharjo: Universitas Muhammadiyah Surakarta; 2009.
4. Rustam M. *Sinopsis Obstetri*. Jakarta: EGC; 2011.
5. Prawirohardjo S. *Ilmu Kebidanan*. Jakarta: Yayasan Bina Pustaka Sarwono Prawirohardjo; 2008.
6. Darmayanti D. Faktor-faktor yang berhubungan dengan kejadian retensio plasenta di rsud dr. H. Moch. Ansari saleh banjarmasin. *An nadaa jurnal kesehatan masyarakat*. 2014;1(2):77-81.
7. Timur DKPJ. *Profil Kesehatan Provinsi Jawa Timur*. Jawa Timur 2012.
8. Cunningham Fg GN, Leveno KJ, Gilstrap Lc, Hauth Jc, Wenstrom Kd, . *Obstetri Williams*. Jakarta: EGC; 2005.
9. IGB M. *Ilmu Kebidanan Penyakit Kandungan Dan Keluarga Berencana*. Jakarta: EGC; 2010.
10. Ramadhani NP, Sukarya WS. Hubungan Antara Karakteristik Pasien Dengan Kejadian Retensio Plasenta Pada Pasien Yang Dirawat Di Rumah Sakit Al-Ihsan Bandung Periode 1 Januari 2010-31 Desember 2010. *Prosiding Snapp: Sains Dan Teknologi*. 2011;2(1):25-32.
11. Arifin Mri. Hubungan Paritas Dengan Retensio Plasenta Pada Ibu Bersalin Di RSUD Panembahan Senopati Kabupaten Bantul Tahun 2012: STIKES'Aisyiyah Yogyakarta; 2015.



12. JNPKR. Asuhan Persalinan Normal. Jakarta: JNPKR; 2010.
13. Astuti E. Deskriptif faktor-faktor yang mempengaruhi wanita usia subur (wus) tidak menggunakan alat kontrasepsi. *Jurnal Bidan Prada*. 2014;5(2).
14. Assalis H. Hubungan Sosial Budaya Dengan Pemilihan Metode Kontrasepsi. *Jurnal Kesehatan*. 2016;6(2).
15. Lismarni L. Hubungan paritas dan usia dengan kejadian retensio plasenta pada ibu bersalin di rsud achmad mocthar kota bukittinggi tahun 2014. Laporan Penelitian Dosen. 2017.
16. Rochjati P. Skrining Antenatal Pada Ibu Hamil Edisi 2 Pengenalan Faktor Risiko Deteksi Dini Ibu Hamil Risiko Tinggi. Surabaya: Pusat Penerbitan Dan Percetakan Unair; 2011.