JMU
Jurnal Medika Udayana
ISSN: 2597-8012 JURNAL MEDIKA UDAYANA, VOL. 14 NO.4, APRIL, 2025
DOAJ DIRECTORY OF OPEN ACCESS JOURNALS
Accredited SINTA 3
Received: 2024-11-29 Revision: 2025-02-10 Accepted:01-03-2025

CHARACTERISTICS OF PLACENTA PREVIA AT PROF. DR. I.G.N.G. NGOERAH CENTRAL GENERAL HOSPITAL IN 2022-2023

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ABSTRACT

Background: Placenta previa can cause the mother to experience bleeding with all its complications so that it can lead to maternal death if not handled optimally so it needs to be given serious attention. This study aims to determine the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Hospital in 2022-2023 based on maternal age, number of parity, pregnancy interval, cesarean section surgery history, curettage history, placenta accreta history, endometriosis history, and uterine myoma history. **Method:** This study uses a descriptive method of cross-sectional and uses a total sampling technique. The subjects of the study were all pregnant women with placenta previa at Prof. Dr. I.G.N.G. Ngoerah Hospital Denpasar. This research data is secondary data obtained from medical records at Prof. Dr. I.G.N.G. Ngoerah Hospital Denpasar during the period of January 1, 2022 ─ December 31, 2023. **Results:** Of 38 cases, the majority were aged 21-34 years (65.8%), multipara (50.0%), with a pregnancy interval > 2 years (60.5%). Most had a history of cesarean section (73.7%), no history of curettage (73.7%), placenta accreta (65.8%), endometriosis (97.4%), and uterine myoma (92.1%). **Conclusion:** Placenta previa cases were most common among women aged 21-34, multipara, with a pregnancy interval >2 years, and a history of cesarean section, but no history of curettage, placenta accreta, endometriosis, and uterine myoma.
Keywords: Placenta previa., pregnant women., Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital

INTRODUCTION

Placenta previa is a condition in which the placenta is located in the lower segment of the uterus which can obstruct the birth canal.[1,2] Placenta previa can cause antepartum hemorrhage, so placenta previa is very dangerous for the mother and fetus.[3] Placenta previa can cause the mother to bleed with all its complications so it can lead to maternal death if not treated optimally. In addition to the mother, placenta previa can also have an impact on the baby so that the baby can be born prematurely and can experience severe complications of asphyxia up to death.[4]

The prevalence of placenta previa in the world is estimated to be around 0.52%, where Asia has the highest prevalence of placenta previa, which is around 1.22%. Based on data from the Indonesian Ministry of Health in 2007, the prevalence of placenta previa in Indonesia in 2005 was 2.77% and 0.85% of them died.[5] At Prof. Dr. I.G.N.G. Ngoerah Hospital Denpasar in 2011, the case of antepartum hemorrhage due to placenta previa was 10.8%.[6,7]

Placenta previa must be detected early so that it can be treated immediately so that the mother can undergo the delivery process smoothly and the baby can be born safely. During the formation of the lower uterine segment or the occurrence of cervical dilation during the inpartu, there can also be placental separation which causes severe bleeding. Another problem with placenta previa is the frequent occurrence of placenta accreta with various spectrums so that it is often followed by a hysterectomy due to bleeding that cannot be treated and can result in maternal death.

Placenta accreta syndrome occurs from abnormal placental implantation and attachment. It is classified based on the depth of the growth inward from the placenta to the uterine wall. This includes placenta accreta, increta, and percreta. This happens due to poor formation of decidua, which limits the lower segment of the uterus. Infiltration trophoblastic giant cell of the spiral arteries were found to be more abundant than endovascular trophoblast infiltration in 50% of placenta previa biopsy specimens. Research from Frederiksen, et al. also found abnormal placental attachment of 7% of 514 cases of placenta previa.[8] It is also like what has been said above shows that the former cesarean section surgery is also a high-risk factor for the incidence of placenta accreta.

Placenta accreta index (PAI) score is used to predict abnormal placental attachment and placental invasion.[9] As a prenatal diagnosis, it is also important to prepare and predict actions so that it can reduce the risk of bleeding and possible complications during childbirth.[10]

Although the incidence of placenta previa is low, the impact is very large and can be fatal for both mother and baby, so it must still be given serious attention. Based on the description that has been conveyed above, the author is interested in conducting research on "Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Central General Hospital in 2022-2023". This study aims to determine the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Hospital in 2022-2023 based on maternal age, number of parity, pregnancy interval, cesarean section surgery history, curettage history, placenta accreta history, endometriosis history, and uterine myoma history.

LITERATURE REVIEW

Definitions

Placenta previa is a condition in which the placenta is located in the lower segment of the uterus which can cause osbtruct the birth canal.[1] Placenta previa can also be defined as a placenta that covers part or all of the internal uterine ostium.[11] Placenta previa can cause bleeding, shock, anemia, and postpartum endometritis in the mother, and can cause death because the mother will lose a lot of blood. In addition, placenta previa can also affect the fetus so that the fetus can be born prematurely and can cause severe complications of asphyxia.[4]

Epidemiology

The incidence of placenta previa in the world is about 0.52%. The highest prevalence of placenta previa is found in Asia, which is around 1.22%. Meanwhile, the prevalence of placenta previa in Europe, North America, and Sub-Saharan Africa is about 0.36%, 0.29%, and 0.27%, respectively.[1] In Asia, the Philippines has the highest prevalence of placenta previa, which is around 0.76%. The prevalence of placenta previa in China is 0.56%. The prevalence of placenta previa in Japan, India, and Korea is about 0.51%, 0.45%, and 0.59%, respectively. The lowest placental previa prevalence in Asia is found in Vietnam and other Asia, as well as the Pacific Islands, which is around 0.44%.[12]

In Indonesia, the prevalence of placenta previa in 2005 based on data from the Indonesian Ministry of Health in 2007 was 2.77% and the number of deaths was around 0.85%.[5] In 2009, 40 mothers died out of a total of 4,726 cases of placenta previa in Indonesia.[4,13] According to WHO, the maternal mortality rate due to placental previa bleeding ranges from 15-20%. In Indonesia, the maternal mortality rate is 305 per 100,000 live births and about 28% of maternal deaths are caused by bleeding.[14] The incidence of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Hospital in 2020 reached 5.12%.[15]

Risk Factors

There are several risk factors associated with placenta previa. The first is the age of the mother. Women over the age of 30 are three times more likely to develop placenta previa compared to women under the age of 20.[16] The age of mothers who are considered at risk of developing placenta previa is under 20 years old and 35 years old or older. Mothers under the age of 20 have immature reproductive organs and an incomplete endometrium, which can increase the risk of placenta previa. For mothers who are 35 years old or older, blood flow to the endometrium is uneven so that the placenta grows wider with a larger surface area.[17]

The second is multiparity. The high number of parity causes reduced vascularization or atrophy in decidua due to previous labor so that the placenta will expand its surface to look for an area with a large blood supply, namely in the lower segment of the uterus.[18]

The third is multiple pregnancies. Multiple pregnancies cause the size of the placenta to enlarge to sufficient blood supply to the fetus so that it can cause part of the placenta to implant in the lower segment of the uterus.[19]

The fourth is a history of cesarean-section surgery. A history of cesarean-section surgery causes the formation of intrauterine scar tissue so that blood flow around the cesarean-section surgery is reduced. This causes the placenta to implant in an area that has adequate blood flow, namely in the lower segment of the uterus.[19,20]

The fifth is a history of curettage and myomectomy. A history of curettage and myomectomy causes decidual vascularization to be disturbed and the endometrial wall to become less fertile so that the placenta will implant in an area that has adequate blood flow to meet the nutritional needs of the fetus, namely in the lower segment of the uterus so that part or all of the placenta can cover the internal uterine ostium.[20,21]

Pathophysiology

Actually, until now it is not known why the placenta implants in the lower segment of the uterus and not in the uterine fundus. In the third trimester of pregnancy, contractions occur as well as thinning and dilation of the uterus so that the placenta is detached and can cause a little bleeding. This early bleeding is rarely a major problem. Bleeding becomes severe during labor because the cervix is thinning (effacement) and widening (dilatation) so that placental separation and bleeding are inevitable (unavoidable bleeding).[22]

Classification

According to Prawirohardjo, placenta previa can be classified into four. The first is the placenta previa totalis. Placenta previa totalis is a placenta previa that covers the entire internal uterine ostium. The second is the partial placenta previa or placenta previa which covers part of the internal uterine ostium. Third is placenta previa marginalis. Placenta previa marginalis is a placenta previa that is only located on the edge of the internal uterine ostium. The fourth is the low-lying placenta previa or placenta previa implanted in the lower segment of the uterus so that the distance between the lower edge of the placenta and the internal uterine ostium is less than 2 cm.[23]

Handling

Sujiyatini and Hidayat stated that the treatment of placenta previa is divided into two, namely conservative treatment and active treatment. Conservative treatment is carried out if the gestational age is less than 37 weeks. If the patient experiences mild bleeding, the mother will be given conservative treatment until gestational age using bed rest, hematinics, antibiotics, and tocolytics if there is his. The patient can go home when the bleeding has stopped, but the patient must not coitute, not work hard, and must immediately go to the hospital if there is bleeding. However, if the patient experiences heavy bleeding, fluid resuscitation and active treatment are carried out.

Active treatment is carried out if the gestational age is 37 weeks or more. Active treatment can also be carried out in preterm labor if active bleeding occurs and fails to be conservative. Active treatment is a treatment that is carried out to remove the baby, either through vaginal delivery or cesarean delivery. Vaginal delivery can be performed if the patient has placenta previa marginalis or a low-lying placenta previa with an opening of 4 cm or more and does not have much bleeding. However, if there is a lot of bleeding, a cesarean section must be performed regardless of gestational age. In addition, cesarean delivery is also carried out if the patient has a placenta previa totalis.[24]

Placenta Accreta Index (PAI) Score

Placenta accreta index (PAI) score is used to predict abnormal placental attachment and placental invasion.[9] As a standard method based in the United States, it can be used to predict abnormal placental attachment due to its inexpensive, cost-effective, and objective methodology.[25] It is used in predicting the presence of placental adhesions in cases of placenta previa, especially in placenta previa anterior insertion. Placental adhesive in placenta previa anterior insertion can increase the risk of maternal and fetal morbidity and mortality.[26]

PAI score consists of several sonography parameters, namely a history of cesarean section, lacuna, the smallest sagittal myometrium thickness, anterior placenta previa, and bridging vessel.[27] Each of these parameters will be weighted to be able to produce a scale of 9, where a score of 0 – 9 indicates the probability of placental invasion which ranges from 2 – 96% each.[28] In patients with placenta previa, PAI score of 4 can be used as a cut-off value to predict placental invasion. If PAI score is above 4, it can be predicted that the patient has placenta accreta.[9] In PAI score, also calculated sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) for each index score.[28]

MATERIAL AND METHOD

This study uses a descriptive method of cross-sectional and uses a total sampling technique. The population in this study is pregnant women with placenta previa at Prof. Dr. I.G.N.G. Ngoerah Hospital in 2022-2023.

The sample of this study is the entire population that meets the inclusion and exclusion criteria. The inclusion criteria for this study were all pregnant women with a diagnosis of placenta previa and had complete medical record data in the medical records of examination results at RSUP Prof. Dr. I.G.N.G. Ngoerah Denpasar in 2022-2023, such as maternal age, number of parity, pregnancy interval, cesarean section surgery history, curettage history, placenta accreta history, endometriosis history, and uterine myoma history. The exclusion criterion for this study was that the patient's medical record number in the register book was not found in the medical record. The research took place at Prof. Dr. I.G.N.G. Ngoerah Hospital from February 2024 to September 2024. This research data is in the form of secondary data obtained from medical records at Prof. Dr. I.G.N.G. Ngoerah Hospital during the period of January 1, 2022 - December 31, 2023. The collected data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0 program.

RESULT

Based on the research that has been conducted, the number of pregnant women with placenta previa recorded in the registration book of Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital for the period January 1, 2022 to December 31, 2023 who meet the inclusion criteria is 38 people. Sample data collection was processed using the SPSS version 26.0 program to obtain the characteristics of pregnant women with placenta previa based on maternal age, number of parity, pregnancy interval, cesarean section surgery history, curettage history, placenta accreta history, endometriosis history, and uterine myoma history. Then the data will be presented in the form of tables and narratives.

Table 1. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on Maternal Age

Maternal Age	Frequency (n=38)	Percentage (%)
≤ 20 years	0	0
21-34 years old	25	65,8
≥ 35 years	13	34,2

Based on the age of the mothers, the research subjects were divided into two groups, namely the 21-34 years old group and the group with an age range of ≤ 20 years and ≥ 35 years. From Table 1, it can be seen that of the 38 research subjects, the group with the age of 21-34 years has the largest number of samples, namely 25 people (65.8%). Meanwhile, the group with the age of ≤ 20 years as many as 0 people (0%), and the group with the age of ≥ 35 years as many as 13 people (34.2%).

Table 2. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on Number of Parity

Number of Parity	Frequency (n=38)	Percentage (%)
Nullipara (parity 0)	3	7,9
Primipara (parity 1)	15	39,5
Multipara (parity ≥ 2)	19	50,0
Grandemultipara (parity ≥ 5)	1	2,6

The results showed that the multipara group (parity ≥ 2) had the largest number of samples, namely 19 people (50.0%). Meanwhile, the nullipara group (parity 0) amounted to 3 people (7.9%), primipara (parity 1) amounted to 15 people (39.5%), and grandemultipara (parity ≥ 5) amounted to 1 person (2.6%).

Table 3. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on Pregnancy Interval

Pregnancy Interval (Years)	Frequency (n=38)	Percentage (%)
0	3	7,9
≤ 2	12	31,6
3	4	10,5
4	5	13,2
≥ 5	14	36,8

From Table 3, it can be seen that the majority of the sample had a pregnancy distance of > 2 years from the previous pregnancy, which was as many as 23 people (60.5%). The study subjects who had never been pregnant were 3 people (7.9%), the pregnancy interval of 3 years from the previous pregnancy was 4 people (10.5%), the pregnancy interval of 4 years from the previous pregnancy was 5 people (13.2%), and the pregnancy interval of ≥ 5 years from the previous pregnancy was 14 people (36.8%).

Table 4. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on Cesarean Section Surgery History

Cesarean Section Surgery History	Frequency (n=38)	Percentage (%)
None	10	26,3
Exist	28	73,7

The results showed that the majority of the research sample had a history of cesarean section surgery in previous pregnancies, which was as many as 28 people (73.7%). Meanwhile, the research sample that did not have a history of cesarean section surgery was 10 people (26.3%).

Table 5. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on Curettage History

Curettage History	Frequency (n=38)	Percentage (%)
None	28	73,7
Exist	10	26,3

The results showed that the number of research samples that had a history of curettage was smaller than that of research samples that did not have a history of curettage. The research sample that had a history of curettage amounted to 10 people (26.3%), while the research sample that did not have a history of curettage amounted to 28 people (73.7%).

Table 6. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on Placenta Accreta History

Placenta Acreta History	Frequency (n=38)	Percentage (%)
None	25	65,8
Exist	13	34,2

The results showed that the majority of the study samples did not have a history of placenta accreta. The research sample that did not have a history of placenta accreta amounted to 25 people (65.8%), while the research sample that had a history of placenta accreta amounted to 13 people (34.2%).

Table 7. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on Endometriosis History

Endometriosis History	Frequency (n=38)	Percentage (%)
None	37	97,4
Exist	1	2,6

Table 7 shows that the number of research samples that have a history of endometriosis is smaller compared to the research samples that do not have a history of endometriosis. The research sample that had a history of endometriosis amounted to 1 person (2.6%), while the research sample that did not have a history of endometriosis amounted to 37 people (97.4%).

Table 8. Characteristics of Placenta Previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital Based on the Uterine Myoma History

Uterine Myoma History	Frequency (n=38)	Percentage (%)
None	35	92,1
Exist	3	7,9

Table 8 shows that the majority of the study sample did not have a history of uterine myoma, which was as many as 35 people (92.1%). Meanwhile, the research sample that had a history of uterine myoma amounted to 3 people (7.9%).

DISCUSSION

From the study, it was found that the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Hospital Denpasar were dominated by the age group of 21-34 years with a total of 25 people (65.8%). Meanwhile, the group aged ≤ 20 years and ≥ 35 years have a lower number of cases, namely 13 people (34,2%). The results of this study are in accordance with research at Dr. Adjidarmo Rangkasbitung Hospital which shows that the incidence of placenta previa is more common in mothers aged 20-35 years, namely 46 people (62.2%), compared to mothers aged <20 years and >35 years, namely 28 people (37.8%).[29] However, different results were obtained from a study conducted by Kurniawati and Triyawati at Dr. Wahidin Sudiro Husodo Mojokerto Hospital where it was found that mothers in the age group of <20 years and >35 years were more likely to experience placenta previa, which was as many as 64 people (84.2%) of all respondents, while at the age of 20-35 years old only 12 people (15.8%) had placenta previa.[30] The age of 20-35 years is considered the ideal age for pregnancy. At the age of under 20 years, the endometrium is not fully developed, especially in the uterine fundus. Meanwhile, after the age of 35, the function of the reproductive system begins to decline which results in uneven blood flow to the endometrium so that the placenta tends to implant in the lower segment of the uterus which can cover the birth canal.[30,31] The difference between the results of the study and the theory can be caused by the differences in the characteristics of the population in each place. At Prof. Dr. I.G.N.G. Ngoerah Hospital Denpasar, most cases of placenta previa occur in the age group of 21-34 years because most pregnant women are in that age range. If most of the pregnant women in the hospital are in the age range of 21-34 years, then naturally there are more cases of placenta previa in this age group, although theoretically the risk of placenta previa is higher at the age of under 20 years and over 35 years old.[23]

Based on the risk factors for the number of parity, the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital are mostly in the multipara group (parity ≥ 2), which is as many as 19 people (50,0%). The results of this study are in accordance with research conducted by Damanik and Zuiatna at Sundari Hospital Medan which showed that mothers gave birth with placenta previa in the primipara parity group as many as 1 person (2.0%), multipara parity as many as 44 people (89.8%), and grandemultipara as many as 4 people (8.2%).[32] However, different results were obtained from research at Abdoel Moeloek Hospital which showed that most cases of placenta previa with a non-risk parity number (< 2) were 46 people (59.7%), while mothers with a risky parity number (≥ 2) amounted to 31 people (40.3%).[33] The higher a mother's parity, the worse her endometrial condition will be. This is caused by decreased vascularization or changes in atrophy in the decidua due to previous delivery, which can result in placenta previa.[18]

The results of the study on the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital were dominated by the 2-year > pregnancy interval group of 23 people (60.5%), while the 2-year ≤ pregnancy interval group had a lower number, namely 12 people (31.6%) and as many as 3 people (7.9%) had never been pregnant. The results of this study are in accordance with research conducted at Dr. H. Abdul Moeloek Hospital, Lampung Province where it was found that the incidence of placenta previa was more common in mothers who gave birth with a pregnancy gap of > 2 years, namely 65 people (74.7%), compared to mothers who had a pregnancy distance of < 2 years, which amounted to 22 people (25.3%).[34] However, the results of this study are different from the research conducted by Arisani et al. at the Palangkaraya Regional and City General Hospital which showed that the percentage of placenta previa incidence occurred more at a < 2-year pregnancy interval with a total of 51.3%, while at a ≥ 2-year pregnancy interval amounted to 48.7%.[35] Pregnancy at too close a distance can cause the endometrium to not fully recover, so the placenta needs to develop wider to meet the needs of the fetus, and this can result in the closure of the internal uterine ostium.[36] The difference between the results and the theory can be caused by a variety of other risk factors that may further influence the occurrence of placenta previa, such as high parity, a history of endometrial defects (curettage, abortion, and surgical scars), and smoking.[23]

Based on risk factors for cesarean section surgery history, the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital mostly have a history of cesarean section surgery, which is as many as 28 people (73.7%). Meanwhile, only 10 people (26.3%) did not have a history of cesarean section. The results of this study are in accordance with research conducted by Anita at Arifin Achmad Hospital Pekanbaru which showed that the percentage of placenta previa incidence occurred more in mothers who had a history of cesarean section surgery with a total of 62.2%.[37] However, different results were obtained from research at Batara Guru Hospital and Hikmah Sejahtera Hospital, Luwu Regency, South Sulawesi

Province where it was found that the incidence of placenta previa occurred more in mothers without a history of cesarean section surgery with a total of 43 people, while mothers with a history of cesarean section surgery only amounted to 7 people.[38] Cesarean section surgery can cause scarring in the uterus to form which results in reduced blood flow around the scar area. This encourages the placenta to implant in areas that have better blood flow, such as the lower segment of the uterus.[19]

Based on risk factors for curettage history, placenta previa occurred more often in the group without curettage history, which was 28 people (73.7%), while the group with a history of curettage was 10 people (26.3%). The results of this study are in accordance with research conducted by Puswati and Oktavia at Arifin Achmad Hospital, Riau Province, which showed that there were 99 respondents (69.7%) who did not have a history of curettage, while 43 respondents (30.3%) had a history of curettage.[39] However, different results were obtained from a study at Muhamadiyah Hospital Palembang where it was found that placenta previa cases occurred more in mothers who had a history of curettage, which was as many as 8 people (80%), while mothers without a history of curettage were 2 people (20%).[40] When the curettage procedure is performed, a fairly deep wound can form on the endometrial wall. If the endometrial wall is not fertile enough, the placenta will expand its implantation area in search of a better source of nutrients, which can eventually lead to placenta previa.[13] The difference between the results of the study and the theory may be due to differences in endometrial recovery conditions after curettage depending on the depth of the wound, the frequency of curettage, and the treatment after the procedure.[41]

The next results showed that the group that did not have a history of placenta accreta, namely 25 people (65.8%) had a higher percentage compared to the group that had a history of placenta accreta, which was as many as 13 people (34.2%). The results of this study are in accordance with a study conducted by Arina at H. Adam Malik Hospital Medan which showed that 42 respondents with placenta previa without other placental abnormalities were 42 people (91.3%), while respondents who had placenta accreta abnormalities were 2 people (4.3%).[42] However, the results of this study are different from the research in Al Hussein Hospital where it was found that the incidence of placenta previa was higher in the group with placenta accreta which was 52.0%.[43] According to the theory, scars from cesarean delivery in the lower segment of the uterine myometrium encourage the implantation of blastocysts in the scar area. This then causes abnormal attachment or invasion of the placental villi in the scar tissue, increasing the risk of placenta accreta.[44] The difference between the results of the study and the theory can be caused by the presence of other risk factors that may be more dominant in increasing the risk of placental previa, such as high parity, history of abortion, and smoking.[23]

Based on the history of endometriosis, placenta previa occurred more often in the group without a history of endometriosis, which was 37 people (97.4%), while the group with a history of endometriosis was 1 person (2.6%). The results of this study are in accordance with the research of Berlac et al. at the Danish Health Register and the Medical Birth Register which shows that 5,454 people have no history of endometriosis have placenta previa, while only 402 people who have a history of endometriosis have placenta previa.[45] However, these results are different from studies in Fondazione Ca' Granda, Ospedale Maggiore Policlinico of Milan, Italy and San Raffaele Scientific Institute of Milan, Italy which shows that placenta previa cases are more common in the group with endometriosis, which is 14 people (82.4%), while the group without endometriosis is 3 people (17.6%).[46] Previous research examining the link between endometriosis and placenta previa suggests that endometriosis lesions in the uterus can reduce uterine contractility, and uterine peristaltic dysfunction can lead to abnormal blastocyst implantation, leading to placenta previa.[47] The discrepancy between the results of the study and the theory can be caused because the diagnosis of endometriosis is often difficult and may go undetected in some women.

The results of the study on the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Denpasar Hospital were dominated by a group without a history of uterine myoma, which was 35 people (92.1%), while the group with a history of uterine myoma had a lower number, namely 3 people (7.9%). The results of this study are in accordance with the research of Mayang Sari and Budianto at Prabumulih City Hospital, there were 21 respondents (6.5%) who experienced tumors (uterine myomas and endometrial polyps) and 303 respondents (93.5%) who did not experience tumors.[21] This result is slightly different from Sarwono's theory which states that placenta previa can occur due to the presence of tumors such as uterine myomas and endometrial polyps, which generally grow in the uterine fundus. In a pregnancy condition, the placenta will look for another location to implant if the uterine fundus is already occupied by a tumor, which is the lower segment of the uterus, which eventually covers the internal uterine ostium. In addition, an enlarged tumor in the uterus can put pressure on the placenta, causing the placenta to shift and cover the internal uterine ostium.[13] The discrepancy between the results of the study and the theory can be caused because it is possible that some women who actually have uterine myomas have not been clinically diagnosed.

CONCLUSION AND SUGGESTION

Based on the results of research on the characteristics of placenta previa at Prof. Dr. I.G.N.G. Ngoerah Central General Hospital in 2022-2023, a conclusion was obtained, namely that the most common cases of placenta previa were found at the age of 21-34 years, namely 25 people (65.8%). A total of 19 people (50.0%) were multipara (parity ≥ 2), 23

people (60.5%) had a pregnancy interval of > 2 years, and 28 people (73.7%) had a history of cesarean section surgery. In addition, 28 people (73.7%) had no history of curettage, 25 people (65.8%) had no history of placenta accreta, 37 people (97.4%) had no history of endometriosis, and 35 people (92.1%) had no history of uterine myoma.

The suggestion from the researcher for the next study is that further research is needed to find the relationship between risk factors and the incidence of placenta previa, and it is necessary to add characteristic variables, such as maternal education factors and smoking history.

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