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Research Article

Maternal-fetal Prognosis of Premature Rupture of Membranes Before 37 Weeks Versus After 37 Weeks of Amenorrhea in an African Environment: Case of the Health District of Commune V of Bamako, Mali

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Abstract

Premature rupture of membranes (RPM) is the slice rupture of Tamnios and chorion producing before any start of work. PROM affects 1 to 18% of pregnancies in some regions of Africa. It is a major concern in the face of which the practitioner aims to save the fetus by minimizing or even eliminating the risks associated with prematurity and to prevent Maternal and perinatal infectious complications. Its management is difficult in Mali because of the inadequacy of neonatology units and the quality of emergency obstetric and neonatal care. The objective of this work was to describe the management and to determine the maternal-fetal prognosis of RPM in a country with limited resources.

Methodology: This study took place at the health center of health reference of commune V of the district of Bamako in Mali. This was a cross-sectional study and comparative with constitution of 2 strata according to the term of the pregnancy. Stratum 1 is made up of before 37 WA and stratum 2 is made up of those after 37 WA over a period of 24 months in 2019a 2021. We included all pregnant women of 28 WA and more, presenting a PRP Met having gives birth at the town's referral health center v. Exclusion criteria were all pregnant women with any vulvar discharge other than PRP and all pregnant women having had an RPM whose term is 28 SA. The statistical tests used were the (%), f'odds ratio (OR) and the 95% confidence interval.

Results: We collected 145 RPM before 37 SA and 175 RPM after 37 SA out of a total delivery of 19721. The overall frequency of PROM is 1.62%, which corresponds to a PRO for 62 deliveries. Mean patient age was 2/ years with extremes of lba 45 years. Management is silent during the period of gravido-puerperality. The therapeutic measures in the mother were: hospitalization (15%) rest (8.3%), antibiotic therapy (91.3%), tocolysis (7.5%), a corticosteroid antenatal pia (13.6) %). Therapeutic measures in newborn were: warming (35.8%), oxygenation (32.6%), resuscitation (19.7%), Vitamin K (/6.3%) and transfer to neonatology (94.1%). Maternal complications of PROM were marked de Tendometritis (20.9%), parietal suppuration (4.1%), episiotomy suppuration (3.2%). Less neonatal complications were prematurity (53%) neonatal distress (6.3%); perinatal deaths (17.3%).

Conclusion: The fight against perinatal death requires the correct management and prevention of PMR especially PMR before 37 weeks. A prevention and treatment protocol in charge should serve as national guidelines and be used in practice for maternal and perinatal care in our health structures.

Keywords: Premature rupture of membranes (RPM); World Health Organization (WHO);

Introduction

The management of premature rupture of membranes (RPM) S is part of the fight against against perinatal mortality considered a major public health problem in the world. In effect according to the World Health Organization (WHO) Ydeaths of newborns often occur in low-income countries. Two-thirds of perinatal deaths affect sub-Saharan Africa. According to this Source the three causes responsible for more than 85% of neonatal mortality are complications of prematurity, causes of per partum neonatal death and neonatal infections. RPM is a pregnancy complication that opens the door to all three of these causes. The complications of prematurity are currently the second leading cause of perinatal death. The RPM is defined as the reopening of Iamnios and the chornon before any start of labor whatever the age gestational [2,3]. RPM affects 1 to 18% of pregnancies in sub-Saharan Africa and the Magreb according to Benamar and Aloulou 3.4 but higher frequencies have been reported up to 31% of deliveries. The frequency of RPMs varies significantly depending on the delay between RPM and the start of work from 31% if no delay is taken into account, to 6% for a delay greater than or equal to 12 hours. [6-9,15]. The duration of the rupture is an important component of the overall estimate of the frequency of RPM because the majority of RPM occur at term, period or time between rupture and onset of labor is short. 6, 2. Preterm PRO< 37 weeks of amenorrhea (WA) and that occurring at term respectively concern 7.2% and 0.7% of all deliveries. It is one of the causes of prematurity concerns 7 to 51% of premature births and 10% of perinatal deaths l5. The maternity wards of the University Hospital Centers (CHU) of Point G and Gabriel Tourê reported a PMR rate of 2.70% in southern Mali against (4.63%) in Mopti in northern Mali [9,10]. frequency and its complications, PROM remains an essential issue in obstetrical practice. current. It exposes the mother and her fetus to an infectious risk. Moreover, before term it exposes the fetus at risk of prematurity. Its management is difficult, particularly because of the major complications such as severe prematurity and its complications, cord prolapse, dystocic presentations and labor abnormalities which make their prognosis uncertain. Studies [9-11] in Mali focused on the management of PMR, however none of his studies described the RPM before 37SA and after 37 SA. Keita N [11] studied prognostic risk factors maternal-fetal of premature rupture of membranes in the obstetrics gynecology department of the reference health center of commune V in the district of BAMAKO. FMPOS medical theses Bamako; 2006, 79. The objective of this study was to describe the management and to determine the prognosis maternal-fetal PMR before 37 WA then compare it to that after 37 WA in a country with resources limited.

Methodology

This study took place over a period of 24 months from June 1, 2018 to June 30, 2020 at the service of gynecology and obstetrics at the reference health center of commune V in the district of BAMAKO. The Commune V reference health center is one of the health resources in Mali. He participates in a stake implement public health programs through emergency management. It has a mission of care, of training, and research. We carried out a cross-sectional and comparative study with the constitution of 2 strata according to the term of the pregnancy. Stratum 1 is made up of patients before 37 WA and stratum 2 is made up of those after 37 SA to compare the prognostic factors. The population was made up of pregnant women admitted to the obstetrics gynecology department of the CV reference health center during the study period. We included in this study all pregnant women of 28 WA and more presenting a premature rupture of the membranes and having given birth in the department of gyneco-obstetrics. Exclusion criteria were all pregnant women with any other discharge from the vulva only RPM and all pregnant women having had a RPM whose term is 28 SA. We made an exhaustive sampling of all RPM cases during the study period, i.e. 270 cases of RPMs. Repeated vaginal examinations were prohibited. Monitoring was clinical, biological and ultrasound. Temperature, pulse, blood pressure, BDCF (fetal heart sounds), appearance of amniotic fluid (AF), ERCF (recording of fetal heart rate) were measured twice per day. Obstetric ultrasound was performed every two weeks. The urine dipstick (BU) was made every week. Cytobacteriological examination (ECBU), vaginal swab (PV), blood count blood formula (NFS), the C reactine protein (CRP) were carried out during the hospitalization.

The minimum sample size (n) was calculated according to the Schwartz formula: n = Z(a) 2 pq/ i", Z(a) = 1.96 reduced spread corresponding to risk a of 5%; i = desired precision = 2%; p = prevalence of PRO = 4.63% = 0.0463 according to Coulibaly in Mali [10]; q = 1-P = 1-0,% = 0.9537. We will add 10% to the size n for inoperable files.

Thus n = 1.962 (0.0463x 0.9537)/0.022 = then n = 196+10/100 x 196 196+19.6 = 216 RPM. The quantitative variables are expressed as an average and the qualitative variables in number and percentage. The prevalence ratio (RP), fodds ratio (OR) and the confidence interval at 95% (ICm) was used for the percentage (%) comparison. For clarity of terminology used we have described them in table 1 below.

Termes	Operational definitions
RPM	Premature rupture of membranes is the spontaneous opening of the amnion and chorion before the onset of labor regardless of gestational age;
Delivery	Expulsion of the fetus if the pregnancy has reached the theoretical term of 28 weeks;
Latency period	Time elapsed between the moment of RPM and the start of labor.
Prevalence ratio	Ratio between the prevalence of PROM before 37 WA and after 37 WA;;
OR	Is determined by the existence or not of complications of PROM Diagnosis of RPM is based on history taking and speculum examination.
Diagnosis of RPM	Is based on history taking and speculum examination.
Chorioamnionitis	Is defined by hyperthermia ≥ 38°C associated with at least 2 of the following signs: painful uterus (or painful UC, or spontaneous labour), purulent LA, fetal tachycardia > 160 bpm;
Fever	Is defined by a temperature ≥ 38 degrees Celsius;

Table 1: Operational definition of terms used Terms opS19.

bpm = Beats Per Minute, UC = Uterine Contractions, SA = Week of Amenorrhea; CRP = C Reactins Proteins, L = Liter, µmol = Micromol, mm^3 = Cubic Millimeter.

Results

RPM frequency before 37 SA

We collected 145 RPM before 37 WA and 175 RPM after 37 WA out of a total delivery of 19721. The overall frequency of PROM is 1.62%, which corresponds to one PROM for every 68 deliveries. Indeed, according to gestational age, the frequency of PROM before 37 WA is 2.8%, i.e. one PROM for 36 deliveries. The frequency of PROM after 37 weeks is 1.3%, i.e. one PROM for 78 deliveries. It reflects a prevalence ratio (RP) of PMR of 2.2. We determined the frequency of PROM before 37 WA and after 37 WA in the age groups which are adolescents, women of obstetrically favorable age and women of high obstetric age as indicated in table 2 below.

Age (year)	AG < 37 WA		AG ≥ 37 WA		
	Number	%	Number %	%	Total (%)
≤ 19	22	6,9	16	5	38(11,9)
20 - 34	96	30	128	40	224(70)
≥ 35	27	8,4	31	9,7	58(18,1)
Total	145	45,3	175	54,7	320(100)

Table 2: Distribution of patients according to age.

The average age was 27 years old with extremes of 16 and 45 years old. GA = Gestational Age.

Therapeutic management of PMR

We have described the therapeutic management of patients with premature rupture of membranes before 37 weeks and after 37 weeks in table 3 below.

Therapeutic management of patients	AG < 37 WA		AG ≥ 37 WA	
	Number	%	Number	%
During pregnancy and during hospitalization				
Rest	145	45,3	175	54,7
Prohibited vaginal examinations Routine antibiotic	145	45,3	175	45,3
therapy	145	45,3	175	45,3
Corticosteroid therapy	34	11	2,6	14,1
Tocolysis	91	49,2	53	62,4
Maternal-fetal monitoring	145	45,3	175	54,7

Spontaneous work				
Yes No	178 7	96,2 3,8	72 13	84,7 15,3
Time from RPM to start of labor (hour)				
< 24 Between 24- 72 > 72	59 115 11	31,9 62,2 5,9	21 57 7	24,7 67,1 8,2
Mode of delivery				
low way caesarean section	128 16	40,0 5,1	140 29	43,8 9,2
Newborn weight (g)				
Between 1000 et 2000 2000- 3000 3000-4000	34 104 7	10,63 32,5 2,17	00 103 72	00 32,19 22,51
Sex				
Male Feminine	95 90	51,4 48,6	48 37	56,5 43,5

g = gram, SFA = acute fetal asphyxia.

We have described the therapeutic management of newborns in the delivery room whose mothers had PROM before 37 WA versus after 37 WA in table 3. Newborns from mothers with PROM before 37 WA all had the chance to be warmed, resuscitated, oxygenated, and to receive vitamin K1 compared to those after 37 WA.

PEC NNE	**AG < 37 WA**		**AG ≥ 37 WA**		**P**	**OR**	**[IC95%]**
	Number	**%**	**Number**	**%**			
Warming Intensive care Oxygenation Vitamin K1	74 43 73 125	23,9 13,9 27,0 46,3	37 18 15 81	11,9 5,8 5,6 30,0	0,000 0,000 0,000 0,000	3,9 3,7 10 7,2	[2,35-6,32] [2,00-6,7] [5,8-20,13] [4,24-12,96]
Forecast Delay (hours = h)							
Less than 24 Between 24 and 48 Greater than 48 Total	140 4 1 145	43,7 1,3 0,3 45,3	174 0 1 175	54,4 0 0,3 54,7		54,4 0 0,3 54,7	314(98,0) 4(1,3) 2(0,7) 320(100)
LA quantity and color							
Anamnius Oligoamnios polyhydramnios Clear Yellow Green Bloody Total (%)	 98 40 4 3 145	44 72 6 30,6 12,5 1,3 0,9 45,3	13,8 22,5 1,9 129 32 4 10 175	41 89 10 40,3 10,0 1,3 3,1 54,7		12,8 27,8 3,1 227(70,9) 72(22,5) 8(2,5) 13(4,1) 320(100)	85(26,6) 161(50,3) 16(5,0) 58(18,1)

Table 4: Care (PEC) of newborns (NNE) in the delivery room.

Complications of PMR

The maternal-fetal complications of PROM are summarized in table 5 below.

Complications of PMR	AG < 37 WA		AG ≥ 37 WA		OR	$IC_{95\%}$
	Number	%	Number	%		
Maternal complications						
Hyperthermia Chorioamnionitis Hemorrhage	67 11 2	83,8 13,8 2,5	23 6 1	76,7 20,0 3,3	1,5 0,6 0,7	[0,5-4,4] [0,2-1,9] [0,1-8,5]
Neonatal complications						
Prematurity Pain Hypotrophy Neonatal deaths	72 7 7 20	22.5 2,2 2.2 6,5	6 13 13 6	1.9 4,1 4,1 1,9	0,000 0,34 0,34 0,001	27(11,5-66,7) 0,6(0,2-1,6) 0,6(0,6-1,6) 4,5(1,8-11,6)
Apgar 1 min away						
0 4 and 7 8 and 10 Total	5 27 113 145	1,6 8,4 35,3 45.3	9 10 156 175	2,8 3,1 48,8 54.7	0,461 0,000 0,006 //	0,659 3,77 0,43 //
Apgar 5 min away						
0	5	1,6	10	3,1	0,34	0,59
7 and 10	140	43,8	165	51,6	0,34	1,69
Total	145	45.3	175	54.7	-	-

Table 5: Distribution of patients according to maternal-fetal complications.

min = Minute. During this study, no maternal deaths were recorded.

Discussion

Methodological approach

We carried out an analytical cross-sectional study with the constitution of 2 strata, which made it possible to compare the frequencies in the strata. During data collection, the time between rupture of membranes and onset of uterine contractions was imprecise. This period may vary from case to case. The incompleteness of obstetric records is inherent in all studies with retrospective collection. Missing data on obstetric records were corrected by cross-checking the different data sources. The sampling was exhaustive, taking into account all the cases of RPM recorded in our service, thus increasing the size of the sample. The time between the moment of rupture and the start of labor is nil. The pregnancy was considered viable from 22 WA. A cohort study would have made it possible to better assess the risk factors associated with this pathology.

Frequency

The frequency of PROM before 37 WA is 0.7% or one PRO for 136 deliveries while that of PRO after 37 WA is 0.9% or one PRO for 112 deliveries. These two prevalences determine a prevalence ratio (PR) of PMR of 1.2. The frequency of the RPM before 37 SA is 1.2 times higher than that after 37 WA.

Table 6 below describes the frequency of PROM according to several studies in the literature.

Preterm PROM is a challenge to modern obstetrics. Its frequency varies from region to region. This frequency of PMR before 37 WA is high in developing countries unlike in developed countries [15,17,18]. This high trend in our context is due to the poor quality of prenatal consultations. They must be refocused and of better

Authors, year, country	RPM Frequency (n/N)	Latency period in hours (h)	Inclusion criteria
Fiston, 2013, RDC [12]	*14,1% (402/2845)	≤ 12	Pregnancy ≥ 24 SA
Kayem G, 2010 [13]	*3% before 34 SA	No delay	Pregnancy ≥ 24 SA
Mantezolo C [14], 2011, RDC	*5,2% (131/2501) *0,4% (before 34 WA) *4,9% (after 34 WA)	No delay	Pregnancy ≥ 28 SA
Pasquier JC [15]	*7,5% before 37WA *0,7 before 28 WA	No delay	Pregnancy ≥ 24 WA
Zeraidi [16], 2004, Maroc	*4,1% (480/11589) 10,2% (before 34 WA) 89,8 (after 34SA)	Delay < 18 h	Pregnancy ≥ 28 WA
Lorthe E [17], 2016, France	*3% before term *1% before 34 SA	No delay	Pregnancy ≥ 22 SA.
Audra [18], France, 2010	*8% (term) *2 - 3% (before term)	No delay	Pregnancy ≥ 14 SA
Keita [11], 2009, Mali	*2,8% (102/3583)	< 12h	Pregnancy ≥ 28 SA
Andriamady [19], 1999, Madagascar	*50,5% (4232/8386)	No delay	Pregnancy ≥ 28 WA
Randrianomanana [20], 2016, Madagascar	*6,01 % (158/2631) (before term)	< 12h	Pregnancy ≥ 24 WA
Our study, 2021, Mali	*1,62% (320/19721) *0,7% (before 37WA) *0,9% (after 37 WA)	No delay	Pregnancy ≥ 28 WA

Table 6: Frequency of RPM according to some studies in the literature.

DRC = Democratic Republic of Congo.

quality to detect risk factors and promote safe motherhood in our urban or rural settings. Indeed, the data in the literature agree on the fact that there is more PROM at term than before term and prove that the frequency of PROM increases with gestational age [21,22]. As a result, we distinguish preterm PMR, that is to say between 28 and 37 SA, and term PMR occurring from 37 SA, which is the most frequent. In general, we observe a difference between the frequency of RPM in general between the different studies in Table VI [12-15,18-20]. Differences in definition explain the significant variations seen in reported frequencies and outcomes. It is the definition of the latency phase and the threshold of fetal viability that determine these variations. In fact, a minimum delay between PROM and actual labor was required so as not to include early ruptures of the membranes at the start of the dilation phase. The more this delay increases, the more the frequency of the RPM decreases. It was estimated at 98% for a period of inf. 24 hours, 1.3% for a delay ranging from 24 to 48 hours and 0.7% for a delay of over 48 hours according to Pasquier and Kayem [13,15].

Maternal age

To the question does the frequency of RPM increase in different age groups?

Our study offered an answer. We determined the frequency of PROM before 37 WA and after 37 WA in the different maternal age groups which are adolescents, women of obstetrically favorable age and women of high obstetrical age as indicated in table 2. The result concerning the association between maternal age and preterm PRO is only found during our study (Table II). The following authors cited by Lorthe [17]. Spinilloe in 1994; Berkowitz in 1998;

Furman in 2000; Shree in 2018 found the following respective ORs for maternal age >35 years: OR = 1.3 (0.6-2.7); ORa = 1.5 (1.3-1.8); ORa = 1.1 (1.0-1.1); ORa = 1.2 (1.1-1.2). The average age of our patients was 27 years old with extremes of 16 and 45 years old. FANOMEZANTSOA in Madagascar in 2015 [23] and Nabhan [26] in 2009 in Egypt found an average age of 25 and 26 years respectively.

Patient care

The diagnosis of RPM is essential in the organization of treatment. The diagnosis of PROM was clinical in our study. Some African authors [3,19,20,23] found that the diagnosis was essentially clinical. On the other hand, other authors [24,25] had had recourse to additional examinations including the crystallization test, pH assay, diamine oxidase assay in crude forms. The initial assessment made it possible, on the one hand, to establish the prognosis of pregnancy and on the other hand to start the appropriate treatment. The clinic was sufficient to make the diagnosis of RPM. However, paraclinical examinations were carried out to assess the impact and help management. The therapeutic approach consisted between before 34 WA in making an in utero transfer. Between 34 weeks and 36+6 days expectation with prophylactic antibiotic therapy was performed. Triggering was systematic after 37 WA. Antibiotic treatment began within 12 hours after diagnosis of PROM and continued during labor and postpartum. This therapeutic approach has been followed by some authors [24, 25,26]. Therapeutic aspects in case of PROM were studied in this study. In PRO between 22 WA and 28 WA with or without anamnios, the fetal prognosis was reserved in our context. We discuss with the patient the possibility of a therapeutic termination of pregnancy given the risk of infection for the mother and the fetus and the uncertain prognosis for the fetus. At the end of this counseling on the fetal prognosis, the result of the discussion with the patients and their families most often led to a position of preservation of the pregnancy with a view to obstetric management. PROM before fetal viability is a rare event whose frequency varies between 0.3 and 1%. Some authors [19, 20,24] have proposed therapeutic interruption for PROM before fetal viability. The frequency of medical terminations of pregnancy varies greatly depending on the studies and depends in particular on the legislative contexts of the countries where they are carried out. Hospitalization was decided for all patients (100%) and allowed total rest until delivery. Studies [20,22,24] prove that hospitalization with rest is essential to avoid complications. Vaginal examination was prohibited for all patients (100%) during hospitalization. According to data in the literature [19-21,24] repeated vaginal exams are correlated with an increase in infectious complications and should therefore be limited as far as possible. In fact normally all patients should wear sterile pads to prevent infections. Maternal and perinatal care is not free in Mali. Some cannot afford these sterile pads. They use other fabrics that have not been sterile. Antibiotic therapy was systematic in all our patients (100%). The role of antibiotic therapy is proven in the literature [25]. A meta-analysis by the Cochrane which analyzed the benefit of antibiotic therapy in the event of preterm PROM has made it possible to prove that for a duration of 48 hours or 7 days of antibiotic therapy leads to a respective reduction in the risk of childbirth by 29 and 20%. In addition, the prescription of antibiotics was associated with a reduction in the risk of infection by 32% and in ultrasound brain abnormalities by 18%. A 43% reduction in the rate of postpartum endometritis was also observed in the event of antenatal prescription of antibiotics [24,25]. Antenatal corticosteroid therapy was performed in this study in patients of gestational age between 28 and 34 weeks. According to data from the literature, the combined use of corticosteroids is also recommended in the event of PROM between 28 and 34 weeks. It is associated with a reduction in the risk of neonatal death (RR = 0.69; IC95: 0.58-0.81), transient respiratory distress (RR = 0.66; IC95: 0.59-0.73), intraventricular hemorrhage (RR = 0.54; 95% CI: 0.43-0.69) [25]. Our corticosteroid therapy protocol is consistent with that of the literature [19,20,23,25]. Tocolysis was done in 49.2% of PROs before 37 weeks versus 62.4 after 37 weeks. The realization of a tocolysis is much more discussed in case of PROM before term. The objective of tocolysis would be to prolong the pregnancy to reduce the neonatal consequences of prematurity. But this extension increases the risk of amnio-chorionic infection linked to a bacterial ascension of vaginal origin. The current recommendations are expert opinions and consist of prescribing tocolysis for 48 hours to allow antenatal corticosteroid therapy [20]. Randrianomanana [19] found 30.0% use of tocolysis in these patients with preterm PROM. Indeed the interest of tocolysis in PROM has also been proven by other authors [16,21]. Labor was spontaneous in 96.2% of PROM before 37 WA against 84.7% of PROM after 37 WA. RPM promotes the release of prostaglandins which induce labor. Authors [11,13,16] have found that the French guidelines for clinical practice concerning expectation or induction leave both possibilities open. Before 32 WA, or even 34 WA, a gain of 1 week of gestational age clearly reduces neonatal mortality and

morbidity and generally favors expectation in the event of preterm premature rupture of membranes (PPROM). Between 34 and 37 WA, the rare risks of severe morbidity linked to prematurity must be weighed against those of an acute maternal-fetal infection or a retroplacental hematoma (HRP). The latent phase was the time between PROM and the onset of labor. It determines the frequency of the RPM. However, some authors have proposed requiring a minimum delay between PROM and the onset of effective labour, so as not to include early ruptures of the membranes at the start of the dilation phase. As this delay increases, the RPM frequency decreases: 31% (no delay), 19% (2 hour delay), 6% (12 hour delay), and 3% (24 hour delay). The PMR before 37 weeks of amenorrhea (SA) varies according to the authors between 0.5 and 7.2% and that occurring before 28 SA concerns 0.1 to 0.7% of all deliveries. It is responsible for 30 to 60% of premature births and about 10% of perinatal deaths. [14]. With regard to the delivery route, 85.6% of the PMRs in this study gave birth vaginally with an ORIC95% = 1.7 (0.9-3.2) compared to 14.4% by cesarean section. Andriamady., *et al*. achieved 20.9% caesarean section in their study. In our study, the main indications for caesarean section were: breech presentation, scarred uterus and fetal distress. Caesarean section frequency is associated with PROM in about 10% in the literature according to [11,15,19]. Our indications for cesarean sections were identical to those reported in the literature [22]. The average weight of the fetus in our study was 1792g with extremes of 1000 to 4000g. The same tendency was obtained in the literature by paumier, Monperous, Nabhan, [24-26] who found an average weight of 1950, 2000 and 2408 g respectively. The sex ratio was equal to 1.0 in our study. Keita N [11] found a sex ratio = 1.9 in favor of males.

Prognosis of PMR

The prognostic evaluation of the pregnancy was considered according to the term of the rupture, the existence of immediate infectious signs, the elements of the index of threat of childbirth and the existence or not of an oligo-anamnios Lorthe [17,27] confirmed that the duration of latency and the frequency of complications decrease with increasing gestational age at rupture. The time between PROM and delivery is called the latency period. Its total duration can vary from a few hours to several weeks. Delivery occurs within 48 hours of rupture for 18 to 93% of cases, within 7 days for 56 to 96% and within 28 days for 78 to 100% according to Lorthe E [16]. Maternal and neonatal complications are collated in Table V. Regarding maternal complications in stratum 1 before 34 WA (83.8%) had fever compared to 76.7% in PRO after 34 WA for an OR = 1.5(0.5-4.4). The difference is not significant. Systematic antibiotic therapy seems to have an impact on PRO in both strata. Chorioamnionitis represented (13.8%) in stratum 1 before 34 WA versus (20.0%) in stratum 2 after 34 WA with an OR = 0.6 (0.2-1.9). In stratum 2 before 34 WA (2.5%) had per partum hemorrhage against (3.3%) in stratum 2 after 34 WA with an OR = 0.7 (0.1-8.5). The difference is not significant in the two strata. Randrianomanana [19] in his study entitled maternal-fetal prognosis of premature rupture of membranes before term found maternal and gravidic complications represented by chorioamnionitis (20.74% of these cases) and oligoamnios (37.04% of these cases). In our study, neonatal complications concerned prematurity, neonatal suffering, fetal hypotrophy, neonatal death. The neonatal complications significantly associated with PROM were prematurity: ORIC95% = 28 (11.5-66.7) and neonatal death: ORIC95% = 4.5 (1.8-11.6) confers Table V Andriamady., *et al*. [19] reported 39.2% neonatal infection and 11.7% perinatal mortality. They held that the fetal prognosis was reserved following preterm PROM. Our fetal prognosis is identical to those of Pasquier and the CNGOF [15,28] who found that pediatric complications in terms of mortality and morbidity were all the more important as the birth was more premature.

Conclusion

The RPM were more frequent after 37 WA than before 37 WA in our clinical practice at the reference health center of commune V in the district of Bamako. The diagnosis of PROM was clinical and made it possible to initiate treatment. It is maternal-fetal and neonatal and was done during pregnancy, childbirth and after delivery. Therapeutic measures were essential such as hospitalization, antibiotic therapy in the mother, antenatal corticosteroid therapy, resuscitation of the newborn, transfer to neonatology to improve the perinatal prognosis. The prognosis of newborns resulting from PROM before 37 WA is dominated by the importance of prematurity, defining the chances of survival and the risks of neonatal complications. The fight against perinatal deaths goes through the correct PEC and the prevention of PROM especially in PROM before 37SA. A prevention and care protocol must be put in place and applied in our health structures. Indeed, it was a question of referring all cases of RPM in time. Perform quality CPNs, diagnose and hospitalize patients.

Conflict of Interest

We declare that we have no direct or indirect interest with a private or commercial organization in relation to the subject treated.

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