



ISSN : 2350-0743

www.ijramr.com



International Journal of Recent Advances in Multidisciplinary Research

Vol. 09, Issue 06, pp.7779-7783, June, 2022

RESEARCH ARTICLE

FREQUENCY AND CARE OF NEONATAL INFECTIONS AT KINDU GENERAL REFERENCE HOSPITAL FROM JANUARY 1 TO DECEMBER 31, 2020

*Kibonge Pascal Desire

Head of Works at ISTM/KIBOMBO

ARTICLE INFO

Article History:

Received 25th March, 2022

Received in revised form

18th April, 2022

Accepted 17th May, 2022

Published online 30th June, 2022

Keywords:

Neonatal Infection,
Newborn,
Antibiotic Therap.

ABSTRACT

In order to determine the epidemiological profile of neonatal infection in Kindu, this retrospective study was conducted on 116 cases of neonatal infection recruited in neonatology from the general reference hospital of Kindu. The clinical picture was marked by the frequency of severe forms. The bacteriological assessment allowed the confirmation of neonatal infection in 92 cases and showed the predominance of gram-negative bacilli, streptococcus B and the absence of listeria monocytogenes. Neonatal infection remains a worrying pathology in terms of its frequency and severity. Its frequency is estimated at 10 to 15% of live births. The incidence of maternal-fetal infection is around 0.6% to 1% at birth. Its severity is linked to the immuno-incompetence of the newborn and to the risk of mortality which is around 10 to 30% depending on the series. Its diagnosis is of variable difficulty highlighting the importance of the paraclinical assessment, in particular the bacteriological samples. Treatment is based on antibiotic therapy adapted to the sensitivity of the responsible germs, based on 3rd generation cephalosporin, amino penicillin and aminoglycoside associated with symptomatic treatment.

INTRODUCTION

The World Health Organization estimates that ten thousand newborns die every day in the neonatal period, 99% of which are in developing countries and 30-40% of this mortality is due to neonatal infections. In Cameroon, and according to the 2004 Cameroon demographic health survey, neonatal infection represents 25% of neonatal mortality. At the Yaoundé gynecological and pediatric hospital, neonatal infection is one of the main causes of neonatal morbidity and mortality. Our work is therefore part of the aim of studying the different epidemiological neonatal bacterial infections, identified the different risk factors for neonatal infections, the different surgical presentations, identifying the different types of different antibiotics in order to improve the prognosis of neonatal infections.

PROBLEM

Arriving in the world, it is very important to adopt home care behaviors and treat illnesses to save their lives. Lack of care or poor quality care have very negative repercussions for the newborn and the child (Cherry, Marie Tsongo Kataliko 2014-P.8). Every year 1.6 million children die in the first months of life and neonatal infections will be the main cause, the majority of an

estimated 325,000 children die from neonatal sepsis and pneumonia when they could be saved, using simple preventive measures such as hygiene of the skin and the umbilical cord, exclusive breastfeeding is a better care for those who are sick by using C.O.P. w). Most deaths are recorded in children with low birth weight or in children who weigh less than 2500 grams at birth. From simple care of these small children and timely treatment of complication allows to treat, to save a large number of them. But neither home care nor the care of young children or even the treatment of neonatal infections have been covered by child health programs, particularly at the level of the integrated management of childhood illnesses (Tigest Kestela et al 2015, p.19). Therefore, the reduction of neonatal mortality has become one of the pillars of newborn paradigms and strategies aimed at reducing child mortality and achieving the millennium development goal. Regional patterns of neonatal mortality should be closely correlated with those of maternal mortality. It will not be sulfonated to find the lowest rates in industrialized countries, where the neonatal mortality rate was just 3 per 1,000 months living sources in 200% found the highest rates that year in South Asia. South (41 per 1,000 but living sources) and in West Africa and France (45 per 1,000 live births) the number of births being higher there. South Asia has the highest number of neonatal deaths of any region in the world (Byass, Peter et al, 2014.P.32). The brand of health promotion and health service for children also affects older children, in fact serious illnesses contracted during the first months of life can cause disabilities for riots and have a negative impact on school performance and yet there is little hard data on serious neonatal illnesses and their long-term

*Corresponding author: Kibonge Pascal Desire
Head of Works at ISTM/KIBOMBO.

health effects. The first weeks of life are crucial for the adoption of caring behaviors such as breastfeeding. (<http://WWX.compuceres.fr/pédiatrie/4/ITEMconsult> 05/02/2021 at 4:30 p.m.). In Africa, only a third of children under 6 months benefit from exclusive breastfeeding the prevalence of neonatal bacterial infection remains high but significantly reduced since the perinatal care measures and in particular since the generation of antibiotic prophylaxis early neonatal streptococcal B infections. a distinction is made between primary bacterial infections, which include primary late neonatal infections, ciliary (noeoconial) infections occurring during hospitalization (Mendi Bennena P; in <http://mendi-menony>), bscogspost.Com) consult on 02/05/2021 at 5:00 p.m.

Neonatal infections, of antenatal or perinatal transmission, most often occur in the first 72 hours of life. The modes of contamination are most often the transmembrane route during chorio-amnionitis with or without rupture of the membranes and the ascending route (from the birth canal) corns of childbirth, more rarely the transplacental hematogenous route. The most common bacteria involved are group B streptococci, then E. coli. For the latter, the K1 encapsulating type stress is the most formidable since it is responsible for neonatal meningitis and sepsis. The other streptococci (in particular cirterococcus) gram-negative bacil and Namibia are rarer. Listema monocytiques cot has become very rare (Henry-Marian. Op cit). The high frequency of neonatal infections is explained by the fact that at this time, the humanitarian system was still immature, for which reason the etiologies of these neonatal infections are diverse and vary from one continent to another. The most frequently encountered germs are bacteria, due to the insufficiency of the technical platform in our care structures. Etiological diagnosis remains difficult.

The incidence of neonatal infections varies according to the regions of the world globally, it is 0.5 to 1% of births in industrialized countries. In countries with limited resources, there are few studies on the incidence of neonatal infections at the community level. In Burkina Faso, in a study carried out at the pediatric hospital center, Charles de Goules, whose analysis covered data from children hospitalized during the period from 2002 to 2005, was posting on neonatal morbidity, the others countered that the Neonatal infection being the leading cause of neonatal morbidity with an index of 73.9%, the majority of these newborns (70%) came from a peripheral health structure (Kouata F, 4é D, Das L, vébarra D, sawadogs. A. 2007 p9). In the Democratic Republic of Congo, Mavinga et al, in a hospital study, observed that neonatal infection was by far the leading cause of neonatal morbidity with an incidence of 36% between 2019-2020 (Unicef 2020.p16).

The Kindu health zone is not spared from neonatal infections, indeed, the neonatal data in the 2020 snis report from the HGR / Kindu neonatologist noted that the incidence of neonatal infections was 70%, 9%, while according to the CDC, the incidence of infections to decrease before the publication of 1996, falling from 1.7 cases per 1000 live births in 1993 to 1.3 per 1000 and, currently an incidence of 0.7 cases per 1,000 live births among black children, 0.5 among Hispanics, and 0.3 among whites, which would be considered semi/tolerable in developing countries (Centers for Disease Control and Prevention, 2500, in <http://www.wikipedia.wiki;fr> consulted on 02/11/2021 at 5:30 p.m.

In this dramatic situation we asked ourselves the main question of knowing. Why neonatal infections continue to be observed with acuity despite all the measures taken by the government in the health training of the province of Maniema in general and more particularly the general reference hospital of Kindu by supporting personnel and equipment.

This leads to the following sub-questions:

- What are the neonatal infections commonly encountered in HGR/Kindu newborns?
- What are the contributing factors?

It is in an attempt to answer these questions that we undertook this study entitled "Frequency and management of neonatal infections at the General Reference Hospital of Kindu".

HYPOTHESES

Given that pregnant women practice childbirth in the traditional way, sometimes they take place in unfavorable conditions, we believe that:

- The frequency of neonatal infections in the maternity hospital of the HGR/Kindu is high;
- Obstructed deliveries, premature and prolonged rupture of the membranes, prematurity and the quality of care would be the contributing factors.

GOALS

Main objective : To properly conduct our study, we set ourselves the general objective of contributing to the reduction of morbidity;neonatal morbidity due to neonatal infections.

Specific objectives : In conducting this study, we are pursuing the following specific objectives:

- Determine the frequency of neonatal infections in the maternity hospital of HGR / Kindu during our study period;
- Identify contributing factors.

METHODOLOGY

Our study population consists of all newborns registered at the maternity ward of the General Reference Hospital of Kindu during the period of our study. Thus, the number is 435 newborns. From this population, we drew a sample of 92 newborns, having presented a reference neonatal infection of Kindu during the period of our study, i.e. 21.1% of cases. Among her children, we counted 51 male children and 41 female children, i.e. 55.4% against 44.6% of the cases that met our selection or inclusion criteria. The present study is of the descriptive and retrospective type, supported by the documentary technique, because it studies a phenomenon having a place in the past, it is part of the field of clinical pediatrics at the general reference hospital of Kindu.

RESULTS

In this part of the work, it was a question of presenting our results on the different themes retained in this study.

Table n°1 clinical signs observed in newborns

Signs	fa	f0	P
Pallor	92	13	14,1
Thermal irregularity (fever or hypothermia)	92	92	100
Digestive disorder (vomiting, diarrhea, refusal to throw up, bloating).	92	92	100
Convulsion	92	9	9,9

In this table, it follows that thermal irregularity (fever or hypothermia) and digestive disorders (abdominal vomiting) are the main clinical signs observed in newborns with neonatal infection, i.e. 15% of cases.

Table n°2. Distribution of neonatal infections according to mode of delivery

Mode of delivery	f	%
Eutocic	22	24
Obstructed (caesarean section or other)	70	76
Total	92	100

It appears from this table that 66% of delivery cases were dystocic against 24% of eutocic delivery.

Table n°3. Frequency of neonatal infections according to time of occurrence

Time of occurrence	f	%
Period	61	66,3
Late	31	33,7
Total	92	100

The result of this table shows us that 66.3% of neonatal infections had appeared early, that is to say in the first seven days of their life, while 33% had appeared late, that is to say after the seventh days of birth.

Table 4. Frequency of neonatal infections according to pregnancy-related pathologies

Pathology diagnosed during pregnancy	fa	f0	%
Malaria	92	92	100
IST	92	32	34,8
nutritional deficiency	92	19	
Others	92	27	29,3

It follows from this table that 150% of the mothers of our respondents had suffered from malaria during their pregnancies.

Table n°5: Distribution of neonatal infections according to treatment

Supported	fa	f0	%
Etiologic	92	92	20,6
Symptomatic or supportive	92	92	100

It follows from this table N°9 that the symptomatic treatment was used more in 150% of the cases than the etiological one in 20.6% of the cases.

Table 6: Frequency of neonatal infections according to discharge modality

Exit mode	f	%
heal	67	72,8
Death	25	17,2
Total	92	150

It appears from this table 10 that 72.8% of newborns suffering from neonatal infections were cured against death in 17.2% of cases.

Table n°7: Distribution of neonatal infections according to the age of the mother

Age groups/year	f	%
15-20	31	33,7
21-25	16	17,4
26-30	18	19,6
31-35	15	16,3
36 et plus	12	13
Total	92	100

It follows from this table No. 11 that 33.7% of the mothers of newborns who presented neonatal infections were aged 15 to 20, followed by that of 26-30 years, i.e. 19.6% of 21-25 years 17.4% of 31-35 years 16.3% and at the end those of 36 years and more 13% of cases.

Table n°8. Distribution of neonatal infections according to the parity of their mother

Primiparous	46	50
Multipara	39	42,4
Grand multiparous	7	7,6
Total	92	100

We noticed that 50% of the mothers were primiparous followed by multiparous 42.2% and grand multiparous 7.6% of cases.

DISCUSSION AND COMMENT

GLOBAL FREQUENCY

During our study on "frequency and management of neonatal infections at the Kindu General Reference Hospital from January 01 to December 31, 2021", we found an overall frequency of 21.1% of cases. These data go in the direction of contradicting those presented in a hospital study, where neonatal infection was the first cause of neonatal morbidity with an instance of 36% in certain hospitals of the DRC, between 2001-2004.(Mavinga and at, quoted by Unicef, 2012, p16). As for us, we believe that the high frequency of neonatal infections at the general referral hospital of Kindu is due to irregular monitoring of pregnant women during CPN sessions, as well as the lack of hygiene on the one hand and on the other hand, poor management of emergency obstetric and neonatal care.

SEX : The analysis of this table shows us that the male sex takes precedence over the female sex, i.e. 55.4% against 44.6% of cases. The incrimination of sex in the occurrence of neonatal infections has not been demonstrated, sex does not influence the occurrence of low birth weight, including premature birth. A study conducted at Kalima Hospital in Maniema in 2011 by SADIKI who worked on the frequency of newborns, he found that the male sex represents 52% of cases. This result is similar to ours which is random. As for us, the predominance of the male sex is only a coincidence and not etiological.

GESTATIONAL AGE AND CLINICAL SIGN

Table 5 shows 92% of our respondents were premature while 34.8% were born at term. In our series, this percentage would be justified by the biological immaturity that characterizes premature babies, in particular their immune system to defend themselves against infectious agents, hence the presence of the clinical signs observed.

DELIVERY MODE

It appears from this table that 66% of delivery cases were dystocic against 24% of eutocic delivery. This result is justified by the fact that newborns who are born high or found in the birth canal are exposed to neonatal infections, by inhalation of meconium fluid, asphyxia, thus presenting signs in the neonatal period.

TIME OF SURVIVAL

The result of this table shows us that 66.3% of neonatal infections appeared early, that is to say in the first seven days of their life, while 33.7% appeared late, that is i.e. after seventh day of birth. According to M.BITWE (sd. P135) the severity of early neonatal infections is explained by the state of immune deficiency of the newborn, the difficulty of their management is the impossibility of carrying the diagnosis on the infection in the newborn while the therapeutic delay is the cause of a high mortality. As far as we are concerned, this percentage can be explained by the same reason mentioned by our predecessor.

ASSOCIATED PATHOLOGY

It follows from this table that 100% of the mothers of our respondents had suffered from malaria during their pregnancies. In our study, the incidence of malaria would be justified by the economic conditions which facilitate the multiplication of plasmodia, thus raging a pandemic in our level.

EXIT MODE : It appears from this table 10 that 72.8% of newborns suffering from infections were cured against death 17.2% of cases. According to BITWE, op.cit, neonatal infections are frequent, serious and their mortality rate is 15%.

The 72.8% of the cures would be explained by the fact that the neonatal infections recorded by the mothers who attended the CPN at the hospital maternity would be less serious, because of the fetomaternal. On the other hand, the deaths observed would be justified by the fact that they would come from the children of mothers who did not respect the case of the prenatal consultation, but who were only referred to the maternity ward of the general hospital of Kindu only during the complications of childbirth. These data reassure us that the management is good because of the high percentage of healing.

MATERNAL AGE AND PARITY

It follows from this table 11, that 36% of low birth weight mothers were aged 15 to 20, followed by those aged 26-30, i.e. 21% aged 21-25 18% aged 31-35 17% and on the other hand we noticed that 53% of the mothers were primiparous, followed by multiparous 45% and grand multiparous 45% and grand multiparous 2% of cases.

As for us, young primiparas suffered from inexperience, neglect, immaturity of their organs, and sometimes the high to be consulted, which increases the risk to the fetus and the newborn to contract infections at birth.

CONCLUSION AND RECOMMENDATION

Here we are at the end of our research "the frequency and management of neonatal infections at the Kindu General Reference Hospital from January 1 to December 31, 2020".

We have made the following assumptions:

- The frequency of neonatal infections in the maternity ward of the Kindu General Reference Hospital is high;
- Difficult deliveries, premature and prolonged rupture of the membranes, the primacy and seriousness of the care, would be the contributing factors;
- The male sex would be more affected to carry out our study well, we have set ourselves the general objective of contributing to the reduction of neonatal mortality due to neonatal infections, with specific objectives Next:
- Determine the frequency of neonatal infections in the maternity ward of the Kindu General Reference Hospital during our study period;
- Identify the contributing factors;
- Start again according to the epidemiological profile such as age.

Our study was retrospective, we used the documentary technique to achieve our objectives. From this methodology, we have come to the following main results:

- The overall frequency of neonatal infections is 21.1% of cases;
- The male gender takes precedence over the female gender;
- 66% of her deliveries were dystocic, against 24% for eutocic deliveries;
- Malaria was the main pathology associated with pregnancy, ie 10% of cases;
- 72.8% of newborns suffering from infections were cured against death 17.2% of cases.

RECOMMENDATIONS

TO THE PEOPLE

- Apply the advice given by the nursing staff;
- Correctly use mosquito nets impregnated with long-acting insecticide;
- Regularly participate in prenatal consultations for pregnant women;

That births take place in the maternity ward?

TO CAREGIVERS

- Work with conscience despite all the difficulties, both maternal and financial.

TO HEALTH AUTHORITIES

- Organize staff refresher sessions for ongoing training.

REFERENCES

BOOKS ARTICLES, MODULES AND THESES

- Bernard et Genviève P. Dictionnaire médical pour les régions tropicales, BERPS, Kangu Mayumbe, 2002.
- Grenier B, Gold F : infections néonatales : développement et maladies de l'enfant, édition Masson 1999
- D'HAINAUT L, concepts et Méthodes de statistique, Bruxelles, éd. Labor, 1995
- DE LANDESHEERE G, introduction à la recherche en éducation, Paris, Amand colin-Bourrelier, 2002
- JAVEAU C, l'enquête par questionnaire, manuel à l'usage du praticien, édition de l'université de Bruxelles, 2010
- PINTO R et GRAWITZ M : méthodes des sciences sociales, éd. Dalloz, Paris, 2010
- UNICEF, RDC, country profile, 2012
- UNICEF, WHO, World Bank. Levels et Trends in child Mortality, 2012
- BITWE M, pédiatrie spéciale et clinique, sd
- Byass, Peter, et al, Direct Data Capture Using Hand-held computers in Rural Burkina Faso : Experiences, benefits and lessons learnt, Tropical medicine and international Health, vol.13, numero spécial 1, Juillet 2008
- Centers for Disease control and prevention. Early-onset Group B streptococcal Disease-United States, 1998-1999.MMWR Morb Mortal Wkly Rep 2000 ; 49 :793-6.<http://www.wikipedia.WIKI.fr> consulté le 16 Février 2019 à 16h23
- Henry-Marian TSONGO, Paris en charge de l'infirmité motrice cérébrale dans la ville-province de Kinshasa, Université de Kinshasa-licence en Médecine physique et réadaptation 2004
- René Tonglet, Epidémiologie, cours inédit, l'UCL, 2005
- Tigest Ketsela, Phanuel Habimana, Jose Martines, Andrew Mbwe, Abimbola Williams, Jesca Nsugwa Sabiti, Aboubacry Thiam, Indira Narayanan, Rajiv Bahl, prise en charge intégrée des maladies de l'enfance (PCIME), 2008
- Kouéta F, Yé D, Dao L, Néboua D, Sawadogo A, neonatale morbidity and mortality in at the Charles de Gaulles pediatric hospital in Ouagadougou (Burkina faso). Cahiers d'études et de recherche francophones santé, 2007 oct-déc ; 17 (4). 187-2002-2006

II.WEBOGRAPHY

- Aujard. Y, infection néonatales, in <http://www-santé>
- Mehdi BENHENIA P, Pédiatrie, Un étudiant à la Faculté de Médecine de Constantine-Algérie in <http://mehdi-mehdy.blogspot>. mise à jour :01-1-2014-Mentions légales-C 2010-2011UMVF-Université Médicale Virtuelle Francophone
- <http://www.Campus.Cerimes.fr/media/campus/deploiement/pédiatrie/enseignement/nouveau-né/site/html/html/4-7.html>.
