

Oligoamnios: Epidemiological, etiological and care aspects at the obstetric gynecology department of Donka National Hospital, Conakry University Teaching Hospital, Guinea

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Abstract

Objectives: to calculate the frequency of oligoamnios, to describe the socio-demographic characteristics, to identify the causes and to establish the maternal and fetal prognosis.

Methodology: This was a 16-month descriptive retrospective study conducted in the Obstetric Gynecology Department of Donka National Hospital. All women diagnosed with oligoamnios who gave birth in the ward during the study period were included in the study. All women who were admitted for complications of oligoamnios and those who had premature rupture of membranes were excluded. After applying the selection procedure, we obtained a sample of size N = 60 cases.

Results: The frequency of oligoamnios was 4.6 per 1000 births. The socio-demographic profile was that of: a pregnant woman aged 40-44 (28, 33%), housewives (50%), not schooled (41.67 %), Married (83.33%), not having not carried out prenatal follow-up (66.67%) and having given birth by cesarean section (80%). The a etiology was not found in 28.33% followed by hypertension (20%). The vast majority of our patients had performed an obstetric ultrasound 96.66% versus 3.44% who did not. Maternal morbidity was dominated by hypertension (10.4%). We recorded 20% perinatal mortality.

Conclusion: Oligoamnios is a serious pathology for two reasons: its etiology which, as a rule, compromises the vital prognosis and its consequences on the development of the fetus mainly on the pulmonary level.

Keywords: Oligoamnios; Etiology; Prognosis

1. Introduction

Oligoamnios is rare if you stick to the clinic alone; this rare condition is linked either to a decrease in the amount of amniotic fluid (LA) until then normal (over-term, fetal death in utero), or above all to insufficient production as seen in certain fetal malformations associated with a growth retardation or certain uterine malformations [1]. Obstetricians are sometimes confronted with the ultrasound discovery of an oligoamnios, the onset of which is either sudden, or slow or progressive [2]. The history of the pregnancy may show an overshoot. term, hypertension during pregnancy, metrorrhagia, genital or general infection, spontaneous cracking of the water sac [3].

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In uterine malformation, fluid insufficient goes hand in hand with egg stature insufficient, forcing the fetus to present at the incomplete breech. Likewise, sometimes in a twin amniotic chorionic pregnancy, one of the two (2) eggs is oligoamniotic [3]. When an oligoamnios is discovered during pregnancy, the obstetrician cannot be satisfied with the discovery of an associated malformation, but must look with great care for other malformations present in the fetus. Children born after OA have at birth a weight, height and head circumference lower than the normal [2]. Thus in the international literature, the frequency and incidence vary according to the authors: Dubbins and Chamberlain recorded 1 case out of 3000 to 4000 pregnancies in the USA in 2006 [4]; 3.54% found by Wenström in the USA [5]; 0.27 per 1000 in Tunis in 2002 [6]; in France the incidence is 0.57 per 10,000 births [2].

The objectives of this study were to: calculate the frequency of oligoamnios, describe the socio-demographic characteristics, identify the causes and establish the maternal and fetal prognosis.

2. Methodology

This was a 16-month descriptive retrospective study conducted in the Obstetric Gynecology Department of Donka National Hospital.

All women diagnosed with oligoamnios who gave birth in the ward during the study period were included in the study. All women who were admitted for complications of oligoamnios and those who had premature rupture of membranes were excluded.

We carried out an exhaustive inventory of cases according to the criteria defined above.

After applying the selection procedure (inclusion and non-inclusion criteria), we obtained a sample of size N = 60 cases. The variables studied were:

- Some quantitative: maternal age, gestational age, prenatal follow-up, performance or not of the ultrasound and the weight of the newborn.
- The other qualitative: marital status; profession; educational level; mode of delivery, etiologies, sex of the child, maternal morbidity and mortality, fetal morbidity and mortality.

3. Results

3.1. Frequency

We collected 60 cases of oligoamnios for a total number of 13,000 births registered, ie an overall frequency of 4.6 per 1,000 births.

3.2. Socio-demographic characteristics

- Age: the 40-44 age group is the most concerned followed by that of 16-19 years with respectively 28, 33% and 26.66%. The average age was 28 years with extremes of 16 years old and 44 years old.
- Occupation: Pregnant women in our series are housewives in 50% of cases.
- Level of education: The majority of pregnant women were out of school, ie 41.67%.
- Prenatal follow-up: the pregnancy follow-up study found that 66.67% of women had not performed any prenatal consultations and only 25% had performed 1 to 2 consultations.
- Marital status: the study of this parameter reveals that 83.33% of women were married against 16.67% of single people.
- Performance or not of the ultrasound: the vast majority of our patients had performed an obstetric ultrasound, ie 96.66% against 3.44% who did not.
- Etiologies: if intrauterine growth retardation, arterial hypertension, and going beyond term were the main etiologies evoked with 20% respectively; 16.67% and 11.67%; it should be noted that a good number of oligoamnios apparently escapes all explanation, at 28.33%.
- Gender of the child: in our study, we found that pregnant women carrying boys are more affected by oligoamnios (86.67%) than those carrying girls 13.33%.

3.3. Prognosis

- Maternal prognosis.
- Mode of delivery: Cesarean was the most used method of delivery, ie 80% against 20% vaginally.
- Maternal morbidity: it was dominated by hypertension, postpartum anemia and eclampsia with 10.4% respectively; 2% and 1%.

- Mother's condition on discharge: all of our patients left the hospital alive.

3.4. Fetal prognosis

Neonatal mortality: we recorded 20% perinatal mortality. However, it should be noted that this perinatal mortality was mainly made up of death –nea (15%).

Birth weight: the low birth weight (less than 2500g) concerned 73.33% of newborns.

4. Discussion

4.1. Frequency

We collected 60 cases of oligoamnios for a total number of 13,000 births registered, ie an overall frequency of 4.6 per 1,000 births. This result is superior to those reported by Chanoufi M [7] and Ratten G J [8] with respectively 0.27 per 1000 births and 0.30 per 1000 births. On the other hand, it is lower than those reported by Stoll and Coll [9] (18.8 per thousand births) and Poitiers et al. in France [4] (30 per thousand births). Our level of oligoamnios could be explained by the fact that this pathology often goes unnoticed without an ultrasound performed during pregnancy.

4.2. Socio-demographic characteristics

- Age: the 40-44 age group is the most concerned followed by that of 16-19 years with respectively 28, 33% and 26.66%. The average age was 28 years with extremes of 16 years old and 44 years old. This result is clearly superior to that reported by Meeus et al. [2] in the same age group, ie 5%.
- Occupation: Pregnant women in our series are housewives in 50% of cases. This finding is contrary to the 36% found by Merger et al. [5] among civil servants.
- Level of education: The majority of pregnant women were out of school, ie 41.67%. Illiteracy is the highest risk factor for stillbirth. This risk decreases as the level of education increases, as shown by J. C Cadwell in Nigeria [10]. Several authors claim a good correlation between education level and stillbirth [1, 11].
- Prenatal follow-up: the pregnancy follow-up study found that 66.67% of women had not performed any prenatal consultations and only 25% had performed 1 to 2 consultations. Most authors are unanimous that the lack of prenatal follow-up is a risk factor for stillbirth and maternal morbidity [5, 2].
- Marital status: the study of this parameter reveals that 83.33% of women were married against 16.67% of single people.
- Performance or not of the ultrasound: the vast majority of our patients had performed an obstetric ultrasound, ie 96.66% against 3.44% who did not. Ultrasound remains, at the end of pregnancy, with intact membrane the means of diagnosis. Guided by the clinic; it is not uncommon for it to be the only revealer. It is able to visualize the exceptional early forms.
- Etiologies: if intrauterine growth retardation, arterial hypertension, and going beyond term were the main a etiologies evoked with 20% respectively; 16.67% and 11.67%; It should be noted that a good number of oligoamnios apparently escapes any explanation, namely 28.33%. Tarari et al. [11] speak of 1 in 2 times. Among the explanations put forward in this case, Tyson et al. [12] implicate the decidual prolactin which would promote the passage of water in the maternal amnion circulation. Maternal hyperosmolarity and decreased maternal plasma volume also play a role for Goodlin and Ross [13].
- Gender of the child: in our study, we found that pregnant women carrying boys are more affected by oligoamnios (86.67%) than those carrying girls 13.33%. This finding is confirmed by Sabine et al. [3] who finds that the condition is 3 times more common in boys than in girls. Likewise Potter et al. [8] in their study on a series of thirty (30) children found only 4 girls.

4.3. Prognosis

4.3.1. Maternal prognosis

- Mode of delivery: Cesarean section was the most widely used mode of delivery, ie 80% versus 20% vaginally. This result is comparable to the 91% found by Sarno et al. [14]. Mandelbrot et all [15] and G. Magnin [6] state that amnioinfusion considerably reduces the rate of caesarean section to 18%.
- Maternal morbidity: it was dominated by hypertension, postpartum anemia and eclampsia with 10.4% respectively; 2% and 1%.
- Mother's condition on discharge: all of our patients left the hospital alive.

4.3.2. Fetal prognosis

- Neonatal mortality: we recorded 20% perinatal mortality. However, it should be noted that the majority of this perinatal mortality consisted of death –nea (15%). This finding is comparable to the observations made by several authors [15, 5].
- Birth weight: the low birth weight (less than 2500g) concerned 73.33% of newborns. This finding of our study is comparable to the 65% found by Meeus et al. [2] and 60% from Poitier et al. [4]. It should be noted that low birth weight is a common consequence of oligoamnios, most often accompanied by fetal malformations.

5. Conclusion

Oligoamnios is a serious pathology for two reasons: its etiology which, as a rule, compromises the vital prognosis and its consequences on the development of the fetus mainly on the pulmonary level. Its severity is directly proportional to its intensity and precocity. Management requires multidisciplinary collaboration.

Compliance with ethical standards

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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