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CLINICAL CASE REPORT ARTICLE

DEATH IN TWIN PREGNANCY ASSOCIATED WITH INTESTINAL OBSTRUCTION: A CLINICAL CASE REPORT

ÓBITO EM GRAVIDEZ GEMELAR ASSOCIADO À OBSTRUÇÃO INTESTINAL: RELATO DE CASO CLÍNICO

MUERTE EN EL EMBARAZO GEMELAR ASOCIADA CON OBSTRUCCIÓN INTESTINAL: REPORTE DE UN CASO

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ABSTRACT

Objective: to report the case of maternal death of a pregnant woman. **Method:** descriptive, retrospective study of qualitative approach, developed at a public hospital in the coastal lowland/RJ. **Results:** pregnant, 22 years old, 25 weeks twin pregnancy, was admitted three times at the obstetric emergency department of a public hospital in the coastal lowlands, in an 18-day interval, complaining of epigastric pain, nausea, vomiting and abdominal pain, being medicated with symptomatic and released for residence. When returning for the fourth time, 24 hours after the last attendance, she died, with bronco massive aspiration as *causa mortis*. **Conclusion:** it is emphasized the importance of comprehensive care to pregnant women, identifying signs and symptoms that go beyond the physiology of pregnancy and become health risks to the mother and her fetus. **Descriptors:** Twin Pregnancy; Obstetric Nursing; Intestinal Obstruction; Maternal Mortality; Fetal Mortality.

RESUMO

Objetivo: relatar o caso de óbito materno de uma gestante. **Método:** estudo descritivo, retrospectivo, de abordagem qualitativa, desenvolvido em um hospital público da baixada litorânea/RJ. **Resultados:** gestante, 22 anos, gravidez gemelar de 25 semanas, deu entrada 3 vezes no setor de emergência obstétrica de um hospital público da baixada litorânea, no intervalo de 18 dias, com queixa de epigastria, náuseas, vômitos e dor abdominal, sendo medicada com sintomáticos e liberada para residência. Ao retornar pela quarta vez, 24 horas após o último atendimento, encontrava-se em óbito tendo *causa mortis* bronco aspiração maciça. **Conclusão:** ressalta-se a importância do cuidado integral às gestantes, identificando-se sinais e sintomas que extrapolam a fisiologia da gestação e tornam-se agravos à saúde da gestante e do feto. **Descritores:** Gravidez de Gêmeos; Enfermagem Obstétrica; Obstrução Intestinal; Mortalidade Materna; Mortalidade Fetal.

RESUMEN

Objetivo: relatar el caso de muerte materna de una mujer embarazada. **Método:** estudio descriptivo, retrospectivo, de enfoque cualitativo, desarrollado en un hospital público de la llanura costera/RJ. **Resultados:** una mujer embarazada, con 22 años, embarazo gemelar de 25 semanas, fue admitida tres veces en el departamento de emergencia obstétrica de un hospital público en la llanura costera, con un intervalo de 18 días, quejándose de dolor epigástrico, náuseas, vómitos y dolor abdominal siendo medicado con sintomática y despachada a la residencia. Al regresar por cuarta vez, 24 horas después de la última llamada, se encontraba en la muerte con bronco aspiración masiva como la causa de la muerte. **Conclusión:** se hace hincapié en la importancia de la atención integral a las mujeres embarazadas, la identificación de signos y síntomas que van más allá de la fisiología del embarazo y se convierten en riesgos de salud para la madre como para el feto. **Descriptores:** Embarazo de Gemelos; Enfermería Obstétrica; Obstrucción Intestinal; Mortalidad Materna; Mortalidad Fetal.

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INTRODUCTION

The World Health Organization/WHO¹ defines maternal death as the death of a woman during pregnancy or up to 42 days after the end of pregnancy, irrespective of the duration or location of the pregnancy, due to any cause related to or aggravated by pregnancy or measures in relation to it, but not due to accidental or incidental causes.

According to the Ministry of Health/MH², "maternal mortality is one of the most serious violations of human rights of women, as it is a preventable tragedy in 92% of cases and occurs mainly in developing countries." This data is an indicator of access to quality obstetric care and women's living conditions, registering large disparities between regions and countries.^{3,4}

Maternal deaths from obstetric causes can be of two types: direct and indirect. Direct obstetric death is the one that occurs by obstetric complications during pregnancy, childbirth or the postpartum period due to interventions, omissions or incorrect treatment; indirect obstetric death is the one resulting from diseases that existed before pregnancy or that developed during this period, worsened by the physiological effects of pregnancy.² In Brazil, the main causes of death are the direct obstetric, being hypertensive diseases and hemorrhagic syndromes the most common.^{3,4}

The twinning corresponds to approximately 1.5% of all pregnancies. The intrauterine fetal death in twin pregnancy is a relatively common event, corresponding to 0.5% to 6.8% of these pregnancies.⁵ Urinary infections are infectious situation of bacterial etiology with the highest prevalence in pregnancy. They complicate about 20% of pregnancies and account for 10% of admissions before childbirth.⁶ Based on this, it is considered rare the coexistence of twin pregnancy and urinary infection in a pregnancy.

The acute abdomen is characterized by abdominal pain, with sudden or progressive source, of variable intensity. Its incidence in pregnancy is around one case per 600 pregnancies. Among the non-obstetric causes, intestinal obstruction is the third most prevalent causes, being responsible for the highest mortality rate in this group of patients. The maternal mortality rate may reach 10-20% and fetal, 26%.⁷

Maternal mortality is represented by the acronym MMR (Maternal Mortality Ratio), which is calculated by computing the ratio of each death in 100,000 live births. The world

MMR is 210, with enormous variation, ranging from 16 in developed countries (Canada, Portugal, Ireland, France, Poland and Russia) to 500 in some African countries (Angola, Cameroon, Congo, Ethiopia, Nigeria and Zambia).⁸

According to the Millennium Goals^{9,10}, of which the fifth objective is to improve maternal health in the world with the reduction of maternal mortality and of the number of caesarean sections.

In developing countries, maternal mortality decreased by 45% between 1990 and 2010. Especially in Brazil, the registered averages show better performance compared to developed countries and Latin America, as there was a reduction of 51% between 1990 and 2010, that is, MMR was 120 in 1990 and reached 56 in 2010.⁸

This clinical case report was conducted by students of the Nursing Course at the Fluminense Federal University/Campus Rio das Ostras, who perform practical teaching activities and supervised internship at a public hospital in the coastal lowland/RJ, place where the indirect maternal death which will be reported occurred.

OBJECTIVE

- To report a case of maternal death of a pregnant woman.

METHOD

Descriptive, retrospective study of qualitative approach, developed at a public hospital in the coastal lowland/RJ, from October 2014 to January 2016. The sample consisted of a pregnant woman, JOS, 22 years old, with a 25-weeks twin pregnancy (two fetuses) who died.

Data related to previous and current obstetric history were extracted from medical service bulletins (MSB) and the medical records of the pregnant woman. The collected data were qualitatively analyzed, paying attention to the variables: signs and symptoms, obstetrical physical examination, prescription, nursing staff records, and laboratory tests. The data were correlated with the bibliographical survey in the Health Virtual Library site (BIREME).

This study was in accordance with the precepts of ethics conduct in Human Research, preserving the identity of the subject.¹¹⁻²

RESULTS

◆ Clinical case report

JOS, 22 years old, multiparous, G III P II, black, incomplete primary education, without medical history, LMP (day of the last menstrual period) on March 18th, 2014, PDC (probable date of childbirth) on December 25th, 2014. The beginning of prenatal care was took place in Itaguaí/RJ, where the mother lived before residing in Rio das Ostras/RJ. After moving out, from Itaguaí to Rio das Ostras, she scheduled prenatal visit for September 25th, 2014 in a Basic Health Unit/UBS.

In the meantime, the mother sought three times the obstetric emergency department of a public hospital in the coastal lowland/RJ, in September 6th-24th, 2014. Her first search for the obstetric emergency service took place on September 6th, 2014, with 25 weeks of

gestation and reporting epigastric pain after liquid intake. She was medicated and discharged.

The next day, September 7th, 2014, the mother returned to the hospital complaining of lower abdominal pain, nausea and vomiting. With obstetrical examination, it was found that fetal heart beats were present. In that attendance, it was required hospitalization as a result of clinical and laboratory diagnosis of pyelonephritis. The pregnant woman was hospitalized for seven days.

During hospitalization, the patient was submitted to clinical, gynecological, obstetrical, laboratory (serologic, EAS (Sediment Abnormal Elements) and blood count) and imaging (ultrasound of the liver, bile and obstetrical ways) exams. In the result of the blood count and EAS, there were changes suggestive to infection and anemia.

BLOOD COUNT	
Hemoglobin	8.40g/dl
RBCs	3.20 millions/mm ³
Platelets	237/mm ³
Leukocytes	13,370/mm ³
Segmented	76%
Bats	4%
Lymphocytes	13%
Monocytes	7%
Basophils	0%
Eosinophil	0%
Myelocytes	0%

Figure 1. Complete blood count.

EAS	
Aspect	Slightly darkish
Color	Citrus
Proteins	Present (+/4)
Glucose	Absent
Ketone bodies	
Hemoglobin	
Bilirubin	
Nitrite	
Leukocytes	Present (++/4)
Bacterial flora	Moderate
Epithelial cells	Some

Figure 2. Sediment Abnormal Elements.

In liver and biliary ultrasonography, the liver presented normal shape and contour with no evidence of focal lesion, discrete hepatic increase in right lobe, no expansion of the intrahepatic bile ducts, gallbladder normally distended, of normal shape and volume, without gallstones. Pancreas surrounded by intestinal hypermeteorism, common bile duct with 3.5 mm and portal vein with 13.6mm.

The examination of obstetrical ultrasonography revealed twin pregnancy with two gestational sacs. One of the fetuses was

pelvic, longitudinal and back right, DBP 66mm and femur 46mm. The other fetus, cephalic, longitudinal and back to the left, DBP 63mm and femur 40mm. the placentas of subsequent insertion with Grade O/I. Normodramnia and GA (gestational age) compatible to 24/25 weeks.

According to notes of the nursing staff, during hospitalization, the pregnant woman did not report pain complaints, slept well at night and had constipation for at least four days.

During the hospital staying, the following medications were prescribed: Ventolin (salbutamol), Betamethasone, Bromopride, Buscopan Compound, Cephalexin 500mg, Cephalotin, Dimethicone (Luftal), Noripurum (ferrous sulfate), Ranitidine, vitamin C, mineral oil.

In clinical tests performed by the medical team, the pregnant woman was with closed cervical without vaginal loss and absent uterine activity. The hospital discharge occurred on September 14th, 2014.

JOS returned to the obstetric emergency on September 20th, 2014, for the third time. This time, her main complaint was abdominal pain. In physical and obstetric examination, the mother had thick cervix, closed and no fluid loss, hydrated, anicteric, being discharged after injectable medication.

On September 23rd, 2014, JOS returned to the clinic again reporting abdominal pain. In the physical examination, the uterine height was 27 cm and there was fetal heartbeat. The patient was attended and medicated. In the medical care bulletin of that day, halitosis was reported. There is a record that the pregnant woman left the hospital a few hours after administration of the prescribed medication, without having been discharged. However, there was no record of the diagnosis and/or conduct that would be taken if she stayed at the health facility.

On September 24th, 2014, with GA of 27 weeks and one day, the mother went, for the fifth time, to the hospital emergency brought by family members from the Municipal Emergency room in maternal and fetal death. The patient had mydriasis, absence of heartbeat, draining large amount of liquid, with fecaloid odor, through mouth and nostrils. There was no FHB (Fetal Heart Beat), distended abdomen and uterus fund with about 20cm. The body was sent to the IML (Lawful Medical Institute) to reveal the cause of death; however, the cause of death declared by the obstetrician on duty, and recorded in the chart, suggests broncho massive aspiration.

DISCUSSION

The data described in the clinical case corroborate the risk profile for maternal death in Brazil: aged 20-34 years, having used the SUS health service, and having less than four years of study.³ Although other studies point that women aged between 40-44 years are more likely to die. Pregnant women with this profile have chances of death twice as high as other women. Black and brown women

also have a higher risk of dying during pregnancy.⁴

Studies show that there is missing information on death certificates for important variables such as skin color and educational attainment and fields 43 and 44. These issues are not unique to Brazil; the accurate measurement of maternal mortality is also a challenge to other developing countries. Either by lack of filling or incorrect filling of all items on death certificates (DC).^{4,8}

Brazil is among the 88 countries with good filling of DC, although more efforts are needed to investigate deaths by the Committees of Maternal Mortality.⁸

Some specific anatomical and physiological changes of pregnancy hamper the assessment of the cause of abdominal pain, mistaking it with most of natural and physiological symptoms existing during pregnancy. The symptoms presented by the pregnant woman in question: constipation, vomiting, nausea and pain in the lower abdomen are common during pregnancy; however, they are also compatible with various diseases related to the gastrointestinal tract. Common complaints in pregnancy diminish or disappear without the use of drugs. It is recommended that if the pregnant woman presents followed episodes of emesis, she should be referred to high risk prenatal, because there may be metabolic disorders that need to be investigated.¹¹

Multiple pregnancy is associated with higher rates of almost all the complications of pregnancy. It presents a high risk of prematurity, high rates of birth defects and growth restriction. Up to 48% of babies resulting from twin pregnancies are born before 34 weeks, compared with 9.7% of babies that result from singleton pregnancies.¹¹

In this clinical case, it is assumed that some conditions might have occurred: bowel obstruction, esophageal reflux disease, acute abdomen and others that could have been diagnosed early through tests such as endoscopy, which would directly visualize the mucosa, the 24 hours pH monitoring or therapeutic tests to support the diagnosis.

In case of intestinal obstruction, it is recommended to guide the user to maintain a diet rich in residues, increase fluid intake and avoid high fermentation food, recommend walking, movement and regulation of bowel habits.¹¹

The incidence of acute abdomen in pregnant women ranges from 1: 500 to 1:635

pregnancies, if considered as non-obstetric cause, and is of great importance, since it is associated with increased maternal and fetal morbidity and mortality.⁷

The main difficulty in diagnosing acute abdomen during pregnancy is the expansion of the uterus that displace other intra-abdominal organs and the high prevalence of nausea, vomiting and abdominal pain.

Intestinal obstruction occurs when the propulsion of contents toward the anus suffers interference. There are several criteria to classify it: the level (high and low slender or colon), the degree (complete, incomplete - sub occlusion or "closed loop"), according to the state of blood circulation (simple or strangulated), the type of evolution (acute or chronic) and the nature of the obstruction (mechanical, vascular or functional).⁷

During pregnancy, the diagnosis of these diseases is more difficult. In general, pregnancy is not associated with an increase of these diseases, but with the increasing severity of them, due to a delay in diagnosis and treatment, as seen in this case. Some anatomical and physiological changes, specific of pregnancy, hamper the evaluation of the pain cause, often confusing with common manifestations of pregnancy, especially complaint of abdominal pain, nausea and vomiting.

According to the medical report on the maternal mortality finding, the hypothesis was intestinal obstruction that caused reflux, resulting in bronco aspiration of gastrointestinal secretion. Aspiration of gastric contents necessarily result in lung inflammation. Large particles cause clogging and small particles, prolonged inflammation. Pneumonia develops in 50% of patients who aspire it, with a 50% of mortality.¹³

The day before the death, the pregnant woman was attended for the fourth time in obstetric emergency reporting abdominal pain and halitosis was recorded in the medical care bulletin, clinical signs of gastric esophageal reflux (GER).

This diagnostic hypothesis, described in the pregnant woman's medical care bulletin, could have been investigated by requesting a simple abdominal radiograph, a cheap and easy examination. It must be requested in orthostatic and supine positions, along with plain chest radiograph. It is estimated that up to 60% of intestinal obstruction suspicions are confirmed by this examination.¹⁴

An enema procedure for intestinal lavage could have also been performed, because it promotes a better intestinal movement, stool

softening and provides a relief of abdominal discomfort and constipation. This procedure can also diagnose intestinal obstruction by the presence of obstacles in the liquid insertion in rectum.¹⁵

According to Law 7498/86 and Decree 94406/87, the enema procedure for bowel cleansing is the nurse's competence, the nursing technician or assistant allowed to, under the supervision of professional nurses, perform this procedure, provided they are not complex cases, which require scientific knowledge and quick decision-making.¹⁶⁻⁸

In a similar case report, occurred in another city in the state of Rio de Janeiro, a pregnant woman was stricken with intestinal obstruction in the same gestational age of JOS, and her medical management was a simple abdominal radiograph, in which it was possible to observe the distended handles of the small intestine. The patient underwent exploratory laparotomy, which revealed great distension of the small intestine from the stomach to the jejunum portion, breaking of adhesions and retrograde milking were performed, with aspiration by nasogastric tube. In this case, the life of the pregnant woman and the fetus was preserved.⁷

It is noticed that, in that case, there was a broader, comprehensive look by the health staff who attended the pregnant woman, valuing the complaint of abdominal pain in addition to the obstetric issue, and taking into account the chance of intestinal obstruction. This fact was not taken into account by the health team who attended the pregnant woman who died.

CONCLUSION

This case study highlighted the importance of comprehensive care, by the whole health team, to pregnant women and their families. The gestational period is considered a physiological process, but may suffer injuries. Health professionals have in their hands the opportunity of, by carefully observing the user, physically examining and with a quality anamnesis, identifying the extent to which presented signs and symptoms are obstetric cause and when they become health problems of pregnant women and fetuses. All of this, along with complementary tests, facilitate early diagnosis, which can give a chance to a better prognosis for the mother and the fetus.

Improving reproductive health conditions is a challenge, as the risk situations affect mainly women with little access to health services. This fact requires assistance to prenatal care and the quality of childbirth, an

effective social control with expansion and qualification of Maternal Death Committees and mobilizing managers, health professionals and civil society in promoting public policies focused on reducing maternal mortality.

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