Analysis of childbirth route in pregnant adolescent, in the last decade (2010 -2020), in Ribeirão Preto-SP

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ABSTRACT
The article deals with an association between an integrative review on methods of childbirth, in ratio to their risks and benefits, and an ecological study based on the choice of route in the adolescent population of Ribeirão Preto. A total of 9727 women between 10 and 19 years old were analyzed during the period from 2010 to 2020. The study aimed to evaluate the criteria used for choosing a gestational resolution, covering possible complications and inappropriate information, justified by the incongruity between the network of health and the target public.

Keywords: Childbirth, Adolescent, Pregnancy.

1 INTRODUCTION

Adolescence is a period of physical and psychological transition in which the human being ceases to be a child and enters adulthood. Occurring in a profound and rapid way physical, mental, emotional transformation and especially the discovery of sexuality that make adolescents more susceptible to sexually transmitted infections and teenage pregnancy. [1]

Adolescence is a period of physical and psychological transition in which the human being ceases to be a child and enters adulthood. Occurring in a profound and rapid way physical, mental, emotional transformation and especially the discovery of sexuality that make adolescents more susceptible to sexually transmitted infections and teenage pregnancy. [1]. Considering that currently, adolescent pregnancy rates have been affected by significant factors such as socioeconomic status, neglect of condom use, [2] change in current values and the emergence of the contraceptive pill. [3]

Teenage pregnancy is a worrying situation due to the risks involved, both for the mother and the baby, since many studies indicate that pregnancy at this time can lead to prematurity, low birth weight, fetal growth restriction and several problems for the mother, including maternal and perinatal mortality. [4]

The mode of delivery chosen can have a significant impact on the health of both mother and baby. Cesarean section is a common delivery option for adolescent women, especially in cases of high-risk pregnancy. However, cesarean section also carries additional risks, including infection, hemorrhage, deep vein thrombosis, and uterine injury. [5]

On the other hand, the vaginal route can also present risks, especially in teenage pregnancies, because labor can be longer and more painful for adolescents, who may be more likely to need analgesia or have obstetric complications requiring intervention, such as episiotomy (cutting in the perineum). In addition, the vaginal route can increase the risk of lacerations in the birth canal, which can lead to complications such as urinary and fecal incontinence.

2 METHODS

An ecological study, conducted with the birth records of babies of mothers between 10 and 19 years old, in the periods from 2010 to 2020, contained in the Birth Information System (DataSUS) and the records of fetal deaths in the same period, which occurred in Ribeirão Preto, state of São Paulo.

3 DISCUSSION

Teenage pregnancy is a public health problem that affects millions of young people around the world, including Brazil. According to the World Health Organization (WHO), teenage pregnancy is defined as one that occurs between 10 and 19 years of age, and most of these pregnancies occur in low- and middle-income countries. [6] According to the Ministry of Health, about 17% of pregnancies in the country occur in adolescents between 10 and 19 years old. [7]

According to the Ministry of Health (BRAZIL, 2005), all women have the right to prenatal care, a service to monitor women during the gestational period in order to ensure the healthy development of pregnancy, allowing a delivery with lower risks for both mother and baby. Gestational follow-up during prenatal care is a proven benefit of protection for prematurity, intrauterine growth retardation, low birth weight, and maternal and infant deaths due to changes in health status both in the prenatal and postnatal periods, in addition to an approach in the psychosocial aspect performed by health professionals through educational and preventive activities. Women should have at least six prenatal visits, one in the first trimester, two in the second trimester and three in the last trimester. [9]

In the adolescent population, prenatal care is even more important in reducing the risk of obstetric and neonatal complications, since pregnancy in this group affects with greater prevalence young people from less favored social groups, often without family, social and partner support. [10] Studies indicate that inadequate follow-up during the gestational period conferred an increased chance of occurrence of prematurity and low birth weight. [11]

Normal childbirth can be classified as one that occurs naturally as a natural phenomenon, so it is also called natural childbirth, so that unnecessary complications or procedures do not occur throughout labor.[12]

Among the benefits found in those born by transvaginal delivery that overlap with neonates born by cesarean section are the lower complication in relation to breastfeeding, the significantly lower frequency of nosocomial infection, immediate recovery after delivery, and the lower frequency of neonates who present in the first minute Apgar of 4 to 6. [13]

Consultations during prenatal follow-up in natural childbirth are used in the health service network as tools for welcoming and bonding, in order to prepare the pregnant woman for natural childbirth, ensuring information from the beginning of pregnancy on the technical aspects of childbirth, as well as repercussions in relation to her health and that of the NB.[1] This approximation between the health system and the pregnant woman is necessary so that the rates of spontaneous delivery in Brazil does not continue to decrease, since much of this decrease is related to factors such as the belief that cesarean delivery is painless, the fear of pain during vaginal delivery, changes in the female genitalia, possibility and schedule for choosing the day of delivery.[14]

Addressing the relationship between urinary incontinence and the delivery routes, the vaginal route presents anatomical damage that can cause the integrity of the muscles and innervation of the pelvic floor, important in the maintenance of urinary continence.[15] On the other hand, the physiological changes of pregnancy, such as modification of the anatomical relations between bladder and uterus, decrease in the strength of the fascia that anchors the bladder neck and high levels of progesterone, may also be attributed to cesarean delivery.[16] Thus, despite affecting women with a history of some type of delivery, it is not possible to affirm a higher prevalence of incontinence by the route chosen due to divergence of studies.[17]

Another important factor in the high rates of cesarean sections in Brazil is the involvement of the postpartum vaginal perineum.[18] Despite the prevalence of perineal lesion in women who underwent resolution vaginally, there are variables related to the occurrence and higher degree of these lesions, among them the increase in maternal age, the number of previous vaginal deliveries, the length of the expulsive period and the vertical position at delivery.[19]

The sociocultural dimension interferes in the type of delivery, with the formation of myths, beliefs and opinions.[20] When it comes to pain, a subjective and variable phenomenon among the population, it is the objective of the health network to know the perception and characteristics of pain experienced by these women during this period in order to contribute to the process of humanization of childbirth care and assist in choosing the best method of pain management.[21] The main justification for The cesarean section of choice is the fear of pain. The insecurity of having their pain neglected and the lack of knowledge regarding the alternatives for pain relief encouraged by the WHO, such as free

movement during labor, massages, baths, acupuncture and music therapy are factors that could be reversed with an adequate integration between health professionals and women in the gestational period.[22]

Delivery by high route, or cesarean section, is defined as the birth of the fetus through an incision in the abdominal wall and another in the uterine wall (laparotomy and hysterotomy, respectively), which allows the extraction of the fetus from the maternal uterus, presenting a surgical approach. The incidence of cesarean deliveries in the world has increased significantly in recent years, where Brazil is among the countries that perform the most cesarean deliveries in the world (55.4%) [23]. This frequency has been increasing since the early 1990s, surpassing the proportion of normal deliveries and exceeding the maximum limit of 15% proposed by the World Health Organization (WHO) [24].

The main reason for choosing the upper route ends up being the little knowledge of women in relation to normal delivery, fear, insecurity and the idea that the abdominal route is the safest, since there has been improvement of the surgical and anesthetic technique, greater availability of resources to prevent fetal risks and the practicality of having a scheduled delivery [25]. Thus, the proportion of cesarean sections turns out to be unequal in the country, being more frequent in women with better socioeconomic status, older age, education and primiparous women, where the route is chosen by the patient herself and often by non-clinical factors, being associated with the idea that this route presents a better standard of care. [26] [27]. Together, the patient's choice for the vaginal route is often not supported or encouraged by the family and professionals, in which counseling during prenatal care predominates the perception that the safety of the woman does not depend on the mode of delivery chosen. [28]

However, each route presents its risk and the choice must be individualized for each case. Surgical resolution can and should be a usable resource when pregnancy presents a maternal and/or fetal risk. When for medical reasons in which there is a real need, cesarean section can bring benefits to the reduction of maternal and perinatal morbidity and mortality. [29] Pregnancy at advanced or late maternal age is considered a risk factor for cesarean delivery as a choice, while adolescence was valued as a protective factor for this. [30] Other risk factors considered are those associated with diabetes, long gestational duration, flexed and pelvic cephalic fetal presentation, low placenta, placental abruption and placenta previa, chronic or pregnancy-specific arterial hypertension and its different degrees (preeclampsia and eclampsia), incomplete prenatal care, hemorrhagic syndrome, among several other factors that should be analyzed and individualized for each patient. [31] [32]

Like any surgical procedure, cesarean section presents its post-resolution risks and presents a higher maternal and infant morbidity and mortality when compared to vaginal delivery. [33] Cesarean section when elective may present risks such as puerperal infection, anesthetic complications, lower rate of skin-to-skin contact in the first hour of life of the NB, increasing the chances of negative

perinatal outcomes, absence of breastfeeding in the first hour of life and a higher rate of hospitalization in the neonatal ICU. [34] [35]

It is evident that the rate of prematurity among adolescent parturients is higher in contrast to women over 20 years of age, mainly due to the immaturity of the reproductive system. Thus, it was evidenced that there is an increase in the percentage in the occurrence of prematurity as the age of the woman decreases and especially when prenatal care is done inappropriately. [36]. In addition, low birth weight (LBW) is the most important factor associated with perinatal mortality and morbidity, according to the World Health Organization (WHO) [36] and that early pregnancy plays a relevant role in its occurrence due to social disadvantage, biological immaturity, unhealthy behavior during pregnancy and a lower adherence of pregnant adolescents to consultations in the prenatal period. [37]. Together, there was a significant increase in the number of live births with Apgar scores lower than 7 in the fifth minute, of the order of 1.95% among adults, 3.3% in the 15 to 19 year age group and 6.0% in early adolescence (10 to 14 years). Since the Apgar score of the fifth minute is characterized as the state of oxygenation of the newborn in the antepartum and intrapartum period, it is considered an important predictor of the evaluation of the well-being and the initial prognosis of the newborn, signaling for a good state of this from values above 7. [36]

Among the clinical and obstetric complications most frequently observed in adolescent pregnancies, infections (urinary and gynecological), anemia, gestational diabetes, hypertensive syndromes (preeclampsia, chronic arterial hypertension) and Restricted Intrauterine Growth (IUGR) stood out, with urinary tract infections and anemia as the main ones due to the greater supply of nutrients for fetal development, and some general nutrient deficiencies may occur. [38]

4 FINDINGS

Aiming at a better data analysis for the study, it was divided into two groups: pregnant adolescents from 10 to 14 years old in the period between 2010 and 2020 and pregnant adolescents from 15 to 19 years old in the period between 2010 and 2020.

Regarding the first group (pregnant women aged 10 to 14 years in the periods between 2010 and 2020), 405 pregnant women were counted, of which 4 (0.98%) did not undergo prenatal care, 71 (17.53%) performed it inappropriately, 21 (5.18%) intermediately, 8 (1.97%) adequately, 88 (21.72%) more than adequately, and 213 (52.59%) did not have sufficient data in the gestational registry. Regarding the delivery routes, 311 (76.79%) were normal deliveries and 94 (23.21%) cesarean sections. Regarding the gestational age at which the delivery was performed, 22 (5.43%) of these adolescents were between the 22nd and 36th week, while 313 (77.28%) were between the 37th and 41st week and 12 (2.96%) at 42 weeks. 58 of these adolescents (14.32%) had no records of gestational age at the time of delivery. As for the babies born alive, 69 (17.03%) had weight less than 2500 grams

at birth, 51 (12.59%) had Apgar scores between 0 and 5 in the 1st minute of life and 8 (1.97%) were diagnosed with congenital anomalies. 4 (0.98%) were double pregnancies.

Regarding the second group (pregnant women aged 15 to 19 years in the periods between 2010 and 2020), 9322 pregnant women were counted, of which 38 (0.41%) did not undergo prenatal care, 1303 (13.98%) performed it inappropriately, 194 (2.08%) intermediately, 210 (2.25%) adequately, 2880 (30.89%) more than adequately, and 4707 (50.49%) did not have sufficient data in the gestational registry. Regarding the delivery routes, 6276 (67.32%) were normal deliveries and 3043 (32.64%) cesarean sections. Regarding the gestational age at which the delivery was performed, 14 (0.15%) of these adolescents were less than 22 weeks, 1108 (11.89%) were between the 22nd and 36th weeks, while 7800 (83.67%) were between the 37th and 41st weeks and 386 (4.14%) were between 42 or more weeks. 14 of these adolescents (0.15%) had no records of gestational age at the time of delivery. As for the babies born alive, 957 (10.27%) had weight less than 2500 grams at birth, 1015 (10.88%) had Apgar scores between 0 and 5 at the 1st minute of life and 145 (1.56%) were diagnosed with congenital anomalies. 128 (1.37%) were double pregnancies.

Table 1 — Pregnant women aged 10 to 14 years (2010-2020)

Total No.	40	39	42	48	45	36	41	30	31	33	20
<22 weeks	0	0	0	0	0	0	0	0	0	0	0
22-36 weeks	7	4	10	8	15	10	8	5	4	6	2
37-41 weeks	33	33	28	39	29	26	31	25	24	27	18
42 weeks	0	1	4	1	1	0	2	0	3	0	0
IG ignored	0	1	0	0	0	0	0	0	0	0	0
He didn't.	0	0	0	0	0	0	2	0	1	0	1
Inadequate NP	0	0	0	0	14	10	14	8	8	12	5
Intermediate NP	0	0	0	0	7	2	6	0	2	8	1
Adequate NP	0	0	0	0	4	0	1	0	1	0	2
PN more than adequate	0	0	0	0	13	14	13	17	15	9	7
NP not informed	40	39	42	48	7	10	5	5	8	9	4
Cesarean delivery	9	10	9	15	11	9	8	2	4	10	7
Normal Childbirth	31	29	33	33	34	27	33	28	27	23	13
Peso < 2500g	4	6	9	7	10	5	8	5	8	7	5
APGAR 0 a 5	4	5	6	5	8	7	5	4	3	2	2

Source: DataSUS.

Table 2 — Pregnant women aged 15 to 19 years (2010-2020)

Total No.	974	963	988	1018	1008	901	756	767	712	593	632
<22 weeks	2	2	2	4	0	0	1	1	1	0	1
22-36 weeks	107	114	144	123	116	94	98	91	81	65	75
37-41 weeks	856	801	788	838	835	755	624	646	602	511	544
>42 as.	6	37	54	63	55	52	33	29	29	16	12
IG ignored	3	9	0	0	2	0	0	0	0	0	0
He didn't.	0	0	0	0	9	5	9	4	3	4	4
Inadequate NP	0	0	0	0	253	215	189	177	176	149	144
Intermediate NP	0	0	0	0	43	35	30	33	19	15	19
Adequate NP	0	0	0	0	38	55	34	25	22	19	17
PN more than adequate	0	0	0	0	465	427	403	440	428	335	382
NP not informed	974	963	988	1028	110	164	91	88	64	71	66
Cesarean delivery	352	322	358	359	318	268	225	225	244	174	198
Normal Childbirth	622	639	629	669	690	633	531	542	468	419	434
Peso < 2500g	117	103	112	108	88	77	72	78	69	60	73
APGAR 0 a 5	90	85	84	90	80	69	57	60	43	46	42

Source: DataSUS.

5 CONCLUSION

According to the Brazilian Institute of Geography and Statistics (IBGE), the rate of cesarean deliveries in Brazil is one of the highest in the world, exceeding 55%. However, according to data from the Information System on Live Births (SINASC), in 2020, more than half (68.5%) of deliveries performed in the municipality of Ribeirão Preto in adolescent mothers were vaginal, with 447 vaginal deliveries, to 205 by surgery, totaling 652 deliveries of mothers between 10 and 19 years old.

It is important to identify an emergency case requiring surgical delivery and appropriate obstetric management at the time of induction when resolution by the vaginal route is decided. Since data from the Information System on Live Births (SINASC) of the municipality of Ribeirão Preto, between the years 2015 and 2020, deaths by vaginal route (51 deaths) stood out 92.7% in relation to those by surgical route (4 deaths).

Although cesarean section may be necessary in cases of emergency, it can also be performed at the option of the mother or doctor, without there being a clear indication that the vaginal route is not safe. This can increase the risks to both mother and baby, especially in the case of teenage pregnancies.

Thus, the choice of the mode of delivery ends up having a very intimate connection with the home environment, knowledge and support given to the woman in this phase. The decision generates a clinical discussion where often the woman ends up not participating in the decision-making process, becoming a choice with great influence of the professional. Many women fail to express their opinions

and desires regarding the mode of delivery because they trust the medical decision. When we talk about adolescents, this lack of autonomy at the time of choice becomes even greater, because they end up having less knowledge and less credibility.

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