

THE MEDICO-PSYCHO-SOCIAL IMPLICATIONS OF PREGNANCY DURING ADOLESCENCE

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THE MEDICO-PSYCHO-SOCIAL IMPLICATIONS OF PREGNANCY DURING ADOLESCENCE (Abstract): The issue of maternity in adolescence is an important one due to the increasing number of adolescent mothers in our country, as well as in other countries, because of the risks involved by a pregnancy at this age, especially from a medical perspective, but also from a social one. **Material and methods:** The current study was conducted between 2012 and 2017 on a group of 103 adolescent mothers aged between 12 and 19 years of age, with a total of 109 children admitted to the Pediatric Recovery Department of Iasi “Sf. Maria” Emergency Hospital for Children. **Results:** The distribution of adolescent mothers by age was: 12%-12 years old, 10%-13 years old, 11% -14 years old, 12%-15 years old, 13%-16 years old, 14%-17 years old, 15%-18 years old, 15%-19 years old. Consideration was given to the existence of acute illnesses during the pregnancies for the mothers included in the study, the background, the level of education, the jobs and the marital status of the young parents, the birth weight of children, the Apgar score, the complications of the newborns, the Rh incompatibility between mother and child, etc. **Conclusions:** These data raise the need for an over-specialization – Infantile Obstetrics – that should deal with the issue of pregnancy in adolescents. In order to have a lower level of unwanted consequences on mother and fetus the close collaboration between the pediatric and the obstetrics sectors is very important for the pregnancy at this age group. **Keywords:** ADOLESCENT MOTHERS, PREGNANCY IN UNDERAGE WOMEN, ADOLESCENCE AND PREGNANCY.

Adolescent pregnancy is one of the most important public health issues today. It is a global phenomenon with both social and medical implications. It is defined as the occurrence of pregnancy in females under the age of 19 years. Annually, 16 million adolescents give birth to children

and about 2 million of them are under the age of 15 years. In Romania, approximately 13 million newborns from mothers under the age of 19 were recorded in 2013. According to the National Institute of Statistics, around 90,000 girls aged 12-18 became mothers in 2009-2012 (1). UNICEF

data show that Romania is one of the top countries in Europe in terms of number of teenage births (2).

Pregnancy during adolescence involves several medical complications along the pregnancy as well as in the postnatal period, due to the immaturity of the organism at this age and the lack of medical education caused by the low level of schooling or poverty, which prevents the access to specialized medical consultations – most of the expectant mothers go to a doctor when they are in labor or they simply do not know they are pregnant until the second trimester (3, 4). What is even worse is that adolescents sometimes become multiparous mothers, which means even more medical complications. In addition, Romania is among the countries with the highest number of teenage pregnancies. The phenomenon is not so widely known, and the importance given to this issue is not as big as it should be (1, 3).

MATERIAL AND METHODS

The current study was conducted between 2012 and 2017 on a group of 103 adolescent mothers aged between 12 and 19 years of age, with a total of 109 children admitted to the Pediatric Recovery Department of Iasi “Sf. Maria” Emergency Hospital for Children. The data was processed using *Microsoft Excel* 2010.

Several variables were considered: the sex of the newborn, the background, the mother's age, the marital status, the level of education, the occupation, whether the pregnancy was medically monitored, the caesarean indication, the number of pregnancies, the number of deliveries, acute illnesses, chronic illnesses discovered during the pregnancy, the presence of risk factors, the place of birth, the mode of delivery, the

presentation, the APGAR score at 1 minute and need to repeat it, the gestational age of the newborn, its weight and length at birth, the compatibility between mother and fetus, the presence of jaundice and its therapy, the type of diet, the treatments administered in the maternity hospital, the anthropometric data on admission to the Pediatric Recovery Department, the type of diet, the mode of administration, the weight gain obtained in the Pediatric Recovery Department, the number of days of hospitalization, pathogen carriage on admission to the Pediatric Recovery Department, treatment, the anti-biogram conducted.

RESULTS

Most of these young mothers were secondary school students (58%), 21% were high-school or vocational school students, 21% graduated only 4-6 grades or are illiterate. Most pregnancies were not monitored from the health perspective (79%), some of the pregnant teenagers did not see a doctor before the moment of the delivery, while the rest of them, 21%, attended prenatal counseling, but rarely and very rarely. We also considered mothers' capacity to provide financial support to their newborns. Thus, 85% of mothers became homestay mothers after their children were born, dropping out of school; 15% continued their studies, but none of them had a job. Sometimes, during pregnancy or labor, there may be conditions that require the obstetrician to perform the caesarean section-thus, 76% had no indication for a caesarean section, while the rest of 24% required a caesarean section. 61% of mothers had another pregnancy in the past, 28% had 2 previous pregnancies, 9% had 3 previous pregnancies and 2% had 4 previous pregnancies (fig. 1).

The medico-psycho-social implications of pregnancy during adolescence

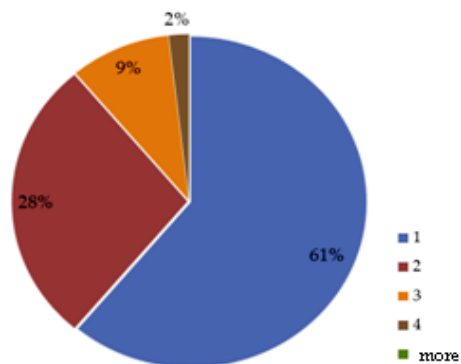


Fig. 1. Number of pregnancies among adolescent mothers included in the study

The number of deliveries for these mothers was also monitored. 71% of them had a previous delivery, 23%-had 2 previous deliveries and 6% had 3 previous deliveries. Consideration was given to the existence of acute illnesses during the pregnancies of the mothers included in the study: 91 of them had no acute illness, 3 of them had urinary tract infection, one of them had ureterohydronephrosis, one of them had pregnancy-induced hypertension, 3 of them had vulvovaginitis and 3 of them had anemia. Since a pre-existing pathology can influence the current pregnancy, the chronic diseases of these mothers were noted, as follows: 97 of them had no history of pathologies, 3 had mental retardation, one had neoplasm, one had lues and one had chronic anemia. 88% did not show risk factors, 2% consumed ethnobotanical substances, 5% smoked, 2% took medicines without medical indication and 3% drank alcohol. Regarding the place of delivery, 66% of deliveries took place at the "Cuza-Voda" Obstetrics and Gynecology Clinical Hospital in Iasi, 10% took place at the "Elena-Doamna" Obstetrics and Gynecology Clinical Hospital, 19% took place in other maternity hospitals in the Moldavi-

an area and 5% were medically assisted in the ambulance. In terms of the type of delivery, 76% of the adolescent mothers delivered their babies naturally, the remaining 24% delivered their babies by caesarean section. There were various fetal presentations – 82% of the babies had a cephalic presentation, 13% had a pelvic presentation and 5% had a transverse presentation. APGAR scores were monitored one minute after birth: 7%-APGAR of 9-10, 54%-APGAR of 7-8, 16%-APGAR of 5-6, 12%-APGAR of less than 4; in 7% of the newborns, doctors were unable to identify the APGAR score. APGAR scores five minutes after birth: 13%-APGAR of 9-10, 61%-APGAR of 7-8, 14%-APGAR of 5-6, 3%-less than 4; in 9% of the newborns, doctors were unable to identify the APGAR score. The newborns of adolescent mothers were classified according to the gestational age and weight criteria: LBW-61%, VLBW-20%, ELBW-7%, ILBW-12%. For the length at birth, the statistical results are: 21%-between 32 and 40 cm, 50%-between 40 and 45 cm, 28%-between 45 and 50 cm and only 1% over 50 cm. The statistical data also included the presence / absence of maternal and fetal compatibility, with the following findings: compatibility in 41% of cases, incompatibility in 17% of cases and unknown in 42% of cases. In 69% of newborns, jaundice was present, while in 31% it was absent. 71% of the cases needed phototherapy, while in 29% of the cases it was not necessary. The newborn's diet in the maternity hospital was also considered to be of interest and was included in the statistical data: natural feeding in 1% of cases, mixed feeding in 18% of cases and artificial feeding in 81% of cases. At the time of admission to the Pediatric Recovery Department, the following investigations were per-

formed: 2%-nasal exudates, 1%-pharyngeal exudates, 1%-eye discharge, 14%-gastric aspiration; in 82% of the children, no investigations for pathogen carriage were performed. The germs identified in the investigations were: *Klebsiella spp.*-9%, *E. coli*-9%, *Pseudomonas aeruginosa*-6%, *Enterobacter spp.*-3%, *S. aureus*-5% and unidentified in 68 % of cases. In 30% of cases, antibiotic therapy and symptomatic treatment were performed. Weight on admission in the Pediatric Recovery Department: 27%-between 1,700 and 2,000 grams, 67%-between 2,000-2,500 grams and 6%-between 2,500-2,700 grams. In the Pediatric Recovery Department, the feeding mode was: 50%-gavage and bottle feeding and 31% of the cases –bottle feeding exclusively. The type of infant nutrition in the Pediatric Recovery Department was predominantly artificial (fig. 2).

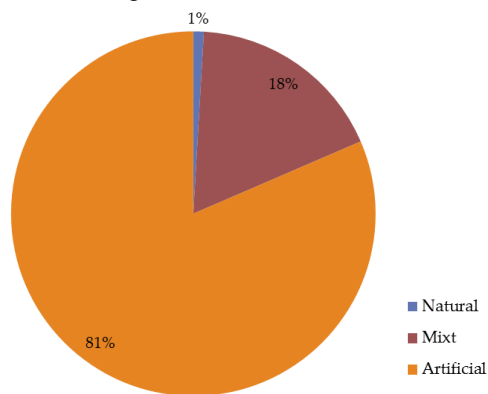


Fig. 2 The type of feeding received by the new born in the Maternity Hospital

The weight on discharge from the Pediatric Recovery Department was also monitored: 20%-between 2,000 and 3,000 grams, 58%-between 3,000 and 4,000 grams, 21%-between 4,000 and 5,000 grams and 1%-over 5,000 grams. The

weight gain was also statistically determined in the Pediatric Recovery Department: 29%-between 100 and 1,000 grams, 53%-between 1,000 and 2,000 grams, 17%-between 2,000 and 3,000 grams and 1%-over 3,000 grams. The number of days of hospitalization within the department: 25%-between 9-30 days, 49%-30-60 days, 23%-60-90 days and 3%-more than 90 days. The sex distribution of neonates from teenage mothers includes 46% males and 54% females. In terms of place of origin, most of the teenage mothers come from rural areas: 75%. The distribution of teenage mothers by age groups: 35%-between 12 and 14 years, 39%-between 15 and 17 years, 26%-between 18 and 19 years.

DISCUSSION

A study conducted in 2011 in the US showed that pregnancy among adolescents and especially among those who are unmarried has medical and socio-economic effects on mother and child (1, 5). In another study conducted in India, all adolescent mothers were married. A child was generally conceived about 4-8 months after marriage (6, 7). A study conducted in Turkey showed that young mothers also give birth to children following sexual abuse, and built-up stress increases the risk of premature birth. The biological age of mothers shows the predominance of the age group between 17 and 19 years of age (8, 9). A study conducted in Timisoara showed that the predominant age at which adolescents become mothers is 16-17 years old (1). According to a study conducted in New York, teenage girls who get pregnant do not complete their middle school or high school studies, while those who continue their high school studies also show the desire to do post-secondary studies (1, 2).

Another study conducted in Romania shows that most adolescent mothers have completed their middle school education, but they do not continue with high school education (8). According to a study conducted in Finland and published in 2013, most adolescent mothers included in their database frequently participated in antenatal checks and tests (10). Another study conducted in Timisoara showed that the newborns generally came from pregnancies that were not medically monitored and that most of them were premature (6). A study conducted in Korea showed that pregnant teenagers saw an obstetrician very seldom compared to pregnant women who were not underage. 15% of the teenage mothers never sought any prenatal care service throughout their pregnancy. Regarding the teenage mother's occupation, most of them (85%) were homestay mothers, while the remaining 15% were students. Teenage mothers whose husbands did not work were more prone to be underweight compared to those whose husbands worked. Adolescent pregnancy is associated with socio-economic decline-most pregnancies occur in developing countries and in poor families (4, 7). A 8-year study conducted in the North Eastern part of Moldavia, published in 2014, showed that the number of cesareans was higher among adolescent mothers (natural birth: caesarean delivery ratio was 1:3). The cesarean distribution by age groups among adolescents shows that these girls are not physically prepared to become mothers (8, 10).

CONCLUSIONS

From our research we concluded that a pregnancy during adolescence is based on unstable ground, both from a psychosocial point of view (poor social and economic conditions, most of the young women belong to ethnic groups with early marriage, elderly partners, abuses, alcohol and drug consumption, the influence of the entourage and the media) and from a medical point of view – an immature body that supports a pregnancy (adolescence represents the period of sexual development paralleled by incomplete maturation, with the development of the gonads and the appearance of secondary sexual characters). The impact of pregnancy during this period is reflected both by the social impact on the mother (resulting in school dropout, repercussions on the mental state, depression, anger, stigmatization by others) and by several medical consequences both for the mother and for the fetus: improper conditions for development in intrauterine life – restricted intrauterine growth, abortion in intrauterine life – birth defects, low birth weight, prematurity, anemia, increased risk for malformations, predisposition to infection, impaired psychosomatic development, growth / speech difficulties, behavioral disorders and emotional dysfunctions. To have a lower level of unwanted consequences on mother and fetus, a close collaboration between the pediatric and the obstetrics sectors is very important for the pregnancy in adolescents.

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NEWS

SURGICAL MANAGEMENT OF PERI-IMPLANT FEMORAL FRACTURES

Peri-implant fractures represent an important problem for the health system due to their increased incidence, the high average age of the affected population and the exorbitant costs that the treatment implies. As the number of implants used in orthopedics increases, it is inevitable that associated fractures become even more common. A significant increase is the number of trochanteric fracture nailing procedures accompanied by peri-implant femur fracture complications. A group from Czech Republic study and analyzed 849 patients with per trochanteric fracture, which had surgically managed with short nail and then analyzed those patients who suffered postoperative peri-implant fractures. Peri-implant fractures were divided into 3 groups according to the established classification, which served as a therapeutic guide. Following her study, they identified 21 postoperative femoral fractures (2.5%). They found 4 fractures (2 with locked nails and 2 with unlocked nails) in the distal portion of the femur, and 17 peri-implant fracture that occurred in the area of the nail and just below the nail tip. Of the 17 postoperative femoral fractures only one patient had distal dynamic locking. Based on this the risk of peri-implant fracture after unlocked distal nailing is higher than after locked nailing. In conclusion peri-implant fractures are a distinct topic in fractures. Trochanteric fractures with internal fixation and distally unlocked short nails does not prevent peri-implant fractures of the femur. We would draw attention to the potential risks associated with the omission of distal locking (Jiří Skála-Rosenbaum, Valér Džupa, Radek Bartoška, Pavel Douša, Petr Waldauf, Martin Krbec. Distal locking in short hip nails: Cause or prevention of peri-implant fractures. *Injury* 2016; 47(4): 887-892).

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