Background. The rate of cesarean section is rising in all countries and number of women with scarred uterus is growing up worldwide. This situation produced an acute health concern. In most cases, obstetricians recommend to pregnant women with scarred uterus repeated cesarean section rather than vaginal birth. This ultimately decision is made by obstetricians due to an absence of biomarkers which will be basics to predict sufficiency of uterine scar and a possibility of vaginal birth. Today obstetricians do not have a warranty covered by a medical insurance based on results of diagnostic investigations during pregnancy or before pregnancy. Therefore obstetricians are avoiding long lasting observation of parturient with scarred uterus during the first period of delivery and do not want to face possible obstacles during the second and third periods of delivery. In Russia cesarean section rate has increased from 7% up to 25% during last 30 years. Nowadays, the rate of cesarean section is varying among hospitals and centers since pregnant women with scarred uterus mostly accumulated in departments for high risk pregnancy with experienced and trained staff belonging to hospitals or centers are dealing with the 3rd level of medical aid. Therefore aim of this study was to retrospectively analysis of dynamical structure of birth modalities during 9 years and rates of common and repeated cesarean sections, as well as the rate of vaginal birth after previous cesarean section in single city emergency hospital in order to survey perspectives of vaginal birth after cesarean section.

Materials and methods. In 2006 Stavropol city emergency hospital was capitally repaired and newly equipped for the 3rd level of medical aid and as the Stavropol state medical university clinic. The study protocol was approved by the university ethical committee and all medical notes concerning delivery were collected. Delivery modes, vaginal birth, common cesarean section, repeated cesarean section and vaginal birth after cesarean section were analyzed in annual cohorts.

Results. 34070 women have delivered for 9 years in this hospital. The annual number of births is increased 2 fold from 2007 to 2014. The annual rate of common cesarean section has increased from 21.6% up to 33%, and the annual rate of repeated cesarean sections among them was also increased from 17.2% up to 26%. The annual number of women, who made decision for vaginal birth after previous cesarean section, was increased from 5.5% up to 8.3%. Luckily we do not have any cases of maternal mortality are related with cesarean scar rupture.

Discussion. It is very little evidence for solid conclusions from this single center experience, but rates of both common and repeated cesarean sections have significantly increased for 9 years, whereas the rate of vaginal birth after cesarean section is very low. However the rate of vaginal birth after cesarean section has increased mostly by maternal request supported by enthusiasm of few experienced obstetricians in our clinic. There were very few cases when we changed delivery mode from previous decision of vaginal birth due to patient’s request to repeated cesarean section. Most cases of decisions to switch from initially planned vaginal birth to repeated cesarean sections have made obstetricians due to unfavorable course of delivery. There were not cases of both maternal and neonatal mortalities are related with cesarean sections either with vaginal birth after cesarean sections. There is a wide range of unsolved problems concerning this question. Firstly, there is not appropriate cooperation between obstetricians who takes care about delivery and gynecologists in outpatient clinics, who takes decision concerning uterine scar sufficiency before pregnancy. Secondly, obstetricians in departments for high risk pregnancy or delivery room usually are dealing with pregnant women during advanced pregnancy and there are not relevant features of scar dehiscence by ultrasound either magnetic resonance imaging. Mostly clinical manifestation of scar can be recognized by experienced obstetricians to make right decision promptly. Thirdly, very important factor is delivery room staff, their professionalism and skills and contributory atmosphere. Fifthly, the most significant factor is the psyche-emotional fighting mood of pregnant women, her self-preparation and psychophysiological preparation to the birth by obstetricians during pregnancy. Women, who made decision for this kind of birth, are required mutual support and getting encouragement from their husbands, friends and relatives. Widely educative activities in mass media by physicians among communities should be encouraged in order to decrease initiative of maternal request for initial cesarean section based on modern life style impact.

Conclusions. We confirm increased rates of both common and repeated cesarean sections during last decade by retrospective analysis of single center data. Percent of vaginal birth after cesarean section is very low, although an annual rate of these activities has increased in our clinic during this period. Highly qualified hospital management should include an education of obstetricians and delivery room staff as well as properly psycho-physiologic preparation of pregnant women with scarred uterus to vaginal birth.

Perspectives. Further researches are called in order to solve a complex of problems are related with cesarean section scar, including close cooperation of obstetricians and gynecologists from outpatient clinics. This kind cooperation is called in order to evaluate a cesarean scar insufficiency and surgical reconstruction of scarred uterus before pregnancy and monitoring of changes in the uterine scar tissue during pregnancy, delivery and postpartum in/out-patient periods. Possibilities to decrease the rate of vaginal birth after previous cesarean sections are depended on further improvements in healthcare management in order to solve complex of professional, technical, educational, social and psycho-emotional factors as well as changes in modern life style.