INTRODUCTION: Premature birth complicates 5-10% of the pregnancies and is the most important cause of perinatal mortality and morbidity in the world. Delivery produced between 26 weeks (the lower limit of fetal viability) and 37 weeks of complete amenorrhoea is considered premature birth. The incidence of premature live births did not present important changes over the past twenty years, its number rised continuously in all countries in the world which report this public health indicator. Several possible causes have been quoted: better measuring and reporting of public health indicators, older age of pregnant women, pregnancy associated pathology (pre-existing or pregnancy-triggered diabetes mellitus and hypertension), changing of fetal viability age from 28 to 26 completed weeks, procedures for in vitro fertilisation leading to multiple pregnancies, increase in the number of cesarean sections [1-2]. Aim of the study: The purpose of the study was to identify determinant factors of medical behavior in premature birth.

MATERIAL AND METHODS: We carried out a retrospective study on premature live births at the Obstetrics and Gynecology Department of the Clinical Emergency Hospital in Tîrgu Mureş during the period between 1st January – 31st December 2013. Data have been obtained from the Register of new-born babies with low birth weight and the Statistical service of the hospital. Based on the history of live births recorded at the Clinic of Obstetrics and Gynecology in Tîrgu Mureş we can observe a decrease in the total number of deliveries maintaining increased number of premature births (figure 1).

Mean age of pregnant women was 31 years+/-5.89 (SD), the youngest mother was 14 years old. The chi-square test shows us that the most premature live births occurred in pregnant women aged between 30 and 40 years (73.30 %), a percentage of 6% of pregnant women were less than 18 years, and only 2.6% have more than 40 years. Based on the register of premature births we obtained information...
Cesarean section has been performed also for other pathologies: premature separation of placenta (DPPNI) in 9.93%; placenta praevia in 2.64%; hypertension (HTA) in 9.93%; fetal suffering in 13.90%, multiple pregnancy in 10.60%. From the total of 151 pregnant women presenting premature delivery in 116 cases was decided to end the pregnancy for maternal and fetal reasons. The gender of the live newborns was 51% male and 49% female. There have been 4 antepartum deaths.

**Discussion:** Modest socio-economic conditions are considered by most authors important favoring factors of premature birth [3]: poor families with several stressful events, limited access to medical information due to poor education, difficult access to medical services or their limited quality, insufficient food or poor in essential nutrients for fetal growth. Our study confirms the data of the literature relating to increased incidence of premature birth in women living under precarious socio-economic conditions. The approximately equal distribution of patients from urban and rural areas may be the consequence of the fact that the Obstetrics and Gynecology Clinic of the Emergency Hospital in Tîrgu Mureş is served by an Intensive Care Unit with neonatal facilities of the latest generation, which increases the number of patients from the surrounding counties. The studied group was not within the limits of the age considered in the literature risk factor for triggering premature labor, i.e. under 18 years of age and more than 40 years. In 8-10% of term births the first sign of triggering labour, even before the appearance of painful uterine contractions, is the spontaneous rupture of membranes [3] with elimination of small or big amounts of amniotic fluid; the preterm rupture of membranes (PPROM) occurs before the 37 completed weeks, in a percentage ranging between 2-4% for monofetal pregnancies and up to 20% in multiple pregnancies. Other authors [4] reported a percentage of 30-35% of preterm birth cases having indication for cesarean section, in 40-45% of the cases the preterm birth occurs spontaneously, and 30-35% of preterm births are triggered by PPROM. Data obtained by studying pregnant women presenting premature delivery in 2013 confirms data in literature relating to PPROM, with an even larger percentage of occurrence (47%). We could not evaluate the association between PPROM and chorioamnionitis (insufficient data). Global analysis of the pregnant women group presenting premature delivery in 2013 shows a predominance of preterm birth in case of grand multiparas (66.22%) and only 33.78% in primiparas. 138 of the 172 premature newborn infants came from monofetal pregnancies, 28 were from complicated twin pregnancies and 6 newborns were triplets.

From all pregnant women who presented preterm delivery, 47% were admitted to the emergency unit of the hospital with spontaneous rupture of membranes for at least 1 hour; 31.25% of the women with multiple pregnancy presented early rupture of membranes (PPROM). 54.16% of them had an indication of requiring cesarean operations and the rest gave birth spontaneously and/or had an oxytocin induced labor.

50.30% of them come from rural areas and 49.70% live in urban areas. In 31.80% of the cases the register of premature births contains no information relating to the education and occupation of the mother; 17.21% of the pregnant women have high education, 15.89% have secondary school education and 35.10% of them are housewives. Global analysis of the pregnant women's group presenting premature delivery in 2013 shows a predominance of preterm birth in case of grand multiparas (66.22%) and only 33.78% in primiparas. 138 of the 172 premature newborn infants came from monofetal pregnancies, 28 were from complicated twin pregnancies and 6 newborns were triplets.

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women highlights the higher frequency of preterm delivery in women living in rural areas, without occupation or secondary school education and grand multiparas. In nulliparas premature birth is associated to multiple pregnancy. Regarding the medical behaviour after the accurate diagnosis of preterm labor, cesarean section was first priority of maternal and fetal considerations; in case of PPROM without labor the aggressive oxytocin induced delivery was preferred. There is also a percentage of 3.97% of pregnant women who presented preterm delivery at their place of residence, in ambulance with or without medical professional to assist the birth; in these cases their transport to the Obstetrics and Gynecology Clinic of the Emergency Hospital and in the Neonatal Intensive Care Unit insured the survival of the preterm newborns.

Most of the preterm newborns have their gestational age over 32 weeks of amenorrhoea and a body weight over 1500 g, they present a higher survival rate compared to the VLB and/or EVLB preterm newborns, but they have an increased risk of mortality and morbidity compared to the newborns born at term [5]. The gender distribution was approximately equal in case of the preterm newborn infants. Taking into consideration the difficulties of collecting data relating to risk factors of preterm birth, we propose to continue the Register of Preterm Birth in electronic form and to mention especially the maternal risk factors and the obstrical and gynecological history of the mothers [6]. A preterm delivery in the medical history represents a major risk factor for further pregnancies [7-8], and its simple consignment in the database would be useful. To follow the evolution of premature deliveries would have been useful to use this electronic database including information regarding the patients’ former hospitalization, tocolytic, antibiotic treatment and preventive procedures to avoid preterm birth.

**CONCLUSIONS:** Analyzing data regarding preterm births during 2013 in the Clinical Hospital of Obstetrics and Gynecology we can conclude:

1. Even if the number of births decreased, premature births did not record the same decreasing tendency;
2. The profile of the pregnant women presenting premature delivery: woman between 30 and 40 years from rural area, average/poor socio-economic conditions, grand multipara who is admitted to the emergency unit with PPROM;
3. Therapeutic behaviour requires in the majority of cases cesarean section of maternal and/or fetal causes;
4. Prevention and treatment of premature birth is important in reducing neonatal adverse reactions and to increase the quality of life in newborns.

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