Introduction
Advancing maternal age especially aged 35 years or older; has been accepted to have more risks from both the maternal and fetal perspectives. A growing number of women have delayed pregnancy. This has become a common phenomenon in the developed world as a result of social, educational and economic factors such as career goals, late marriage.

The increase in the number of women delivering at advanced ages is occurring mainly in primiparas. This might be due to advances in reproductive technologies. Modern infertility treatment has increased the number of women able to become pregnant at advanced ages. The outcome of these pregnancies has raised concern, because older age is associated inherently with higher incidence of chronic disease (1,2). For the older woman with medical problems, the obstetrical complications as well as perinatal morbidity and mortality are higher. For the woman who is in good physical condition, these risks are invalid. On the other hand, some studies suggest that elderly gravida had a high risk of poor pregnancy outcome (3), others have found little association between advanced maternal age and pregnancy outcome (4).
The aim of our study was to determine whether advanced maternal age (aged 35 years or older) leads to increased rate of poor maternal and perinatal outcomes.

Materials and Methods

Hospital charts of 4172 women who were delivered between January 1999 and February 2004 were reviewed for mode of delivery, pregnancy complications and neonatal outcome. The study population was subdivided based on age, comparing women aged 35 years or older with women aged under 35 years. The women were identified through a search in a retrospective chart review in which demographic data, including parity and gravidity were recorded. Deliveries before 20 weeks and infants weighing less than 500 g were excluded.

The maternal variables included medical complications (defined as hypertensive disorder or diabetes), premature rupture of membranes, preterm births, postmaturity and cesarean delivery. Neonatal outcome variables included birth weight, Apgar 1st and 5th minutes, Apgar 5th minutes <7, cord pH, neonatal intensive care unit admission. Also major fetal and chromosomal anomalies were recorded.

All pregnant were under antenatal control including hemoglobin test, urine test, blood type and Rh test, ultrasonographic examinations and screening for gestational diabetes.

All statistical analyses were done with the SPSS statistical package (SPSS Inc., Chicago, IL, USA). Means of continuous variables were compared by using t tests or Mann-Whitney U tests, depending on their distribution. Chi-square analysis was used for comparison of groups. The level of significance was set at 5%.

Results

The demographic characteristics of the study group are presented in Table 1. The study population included 3607 (86.5%) women aged under 35 years, and 565 (13.5%) women aged 35 years or older. Gravida and parity were higher in older group (p=0.001, p=0.001). Also education status was poor in older group (p=0.001).

Complications of pregnancy (preeclampsia-p=0.001, antenatal bleeding-p=0.001) were higher in the older group (Table 2). There was no significant difference between two groups in preterm delivery (p=0.226), but postterm delivery was significantly higher in older group (p=0.003). Cesarean delivery rate (57.9%) was increased in women aged 35 years or older compared with the younger group (p=0.001).

Discussion

Because majority of studies have pointed out perinatal and maternal outcomes in women aged over 35 years, we preferred to address pregnancy outcome in women aged over 35 years.
Since, the percentage of women having a first birth at age of 30 to 44 years doubled; by 1987, the percentage had risen to 16 (5). This trend is expected to continue.

This study involved a relatively large series of women at least 35 years old from a single center. In the past two decades, the rate of nulliparous births was increased more than 50% for women aged 30 to 39 years and increased by 50% in women aged 40 to 44 years (6,7). In our study, this high percentage is not related with an increase in the number of women in this group conceiving with the aid of assisted reproductive technology. Although 8.5% (48) of 565 older women delivered for the first time, 54% (305 women) of the older women delivered for the fifth time or more. In our study, many of the older multiparas were grand multiparas who were different in social and economic status from the older primiparas.

Early studies suggested that women aged over 35 years are at increased risk for obstetrical complications as well as perinatal morbidity and mortality (8,9). Berkowitz et al reported only slightly increased risks for gestational diabetes, pregnancy induced hypertension, placenta previa or abortion, and cesarean delivery (8). In contrast, Cunningham et al revealed a significantly increased incidence of hypertension, diabetes, abortion, preterm delivery, and stillbirth and placenta previa (9). In the same way, Bobrowski et al stated that the risk for preeclampsia in the elderly multipara was significantly higher than expected on the basis of age and parity (10). Ili et al found ablation placenta and preeclampsia higher in multipara aged over 40 years (11). Gocmen et al reported higher maternal complication rates-preeclampsia, chronic hypertension, abortion placenta in women aged 35 years or older (12). The difference between these studies is attributable to the socioeconomic status, which affects access to health care systems. The lack of major fetal and chromosomal anomalies in our older women was encouraging. Hollier et al showed that the risk for all nonchromosomal abnormalities increased significantly with maternal age; club foot was increased significantly after the age of 35 years and heart disease after the age of 40 years (13). The importance of adequate antepartum care and genetic counseling in older women is clear (14,15). The older woman is more likely to request preconceptional counseling, either because she has postponed pregnancy and now wishes to optimize her outcome, or she does so prior to infertility treatment.

The overall maternal outcomes in our series were good, except for relatively high cesarean section rate which was primarily associated with elective operations and history of prior cesarean section. The other two important indications were fetal distress and cephalopelvic disproportion. In the primiparous women, most of cesarean deliveries were due to elective reasons whereas in the multiparous women most were due to previous cesarean delivery. Dulitzki et al stated that very advanced maternal age, compared with younger age, was associated with a significantly higher rate of cesarean delivery (OR 7.3; 95% CI 1.5, 8.8) (16). On the other hand, the overall cesarean rate in the United States during 1992 was 22.3% and 31.7% for women between 40 and 49 years old (17). Gol et al also revealed that women aged 40 years or older had a higher risk of cesarean delivery than do younger women and they related this due to malpresentation, dysfunctional labor and previous cesarean sections (18).

Women aged 35 years or older compromise a distinct group and are susceptible to different obstetric risks. On the basis of our findings, we believe that women aged over 35 years should be informed of risks of pregnancy and followed up closely for the possible complications.

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References