Age at menarche in Jordanian girls

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The most important event in the whole process of female puberty is the onset of cyclic menses (menarche). The age of the menarche varies in different part of the world and is known to be influenced by genetic, socio-economic status, and environmental conditions, body status and level of education,[1] age at menarche was first calculated in mid 19th century in Denmark,[2] since then, many authors have used different methods to calculate age at menarche in different parts of the world. Since age of menarche is an important factor in health planning, we reported here the distribution of age at menarche among Jordanian students and compare it to Jordanian women who was born 40 years ago, to look for secular trend on any difference between menarche age now and 20 years ago.

Female university students and their female relatives were haphazardly invited from first of June until 30th December 2001 to participate in this study. The student population of the 3 major universities; University of Jordan, Jordan University of Science and Technology and Yarmouk University, Jordan roughly represent the population in Jordan with the exception of the age. The system for university admissions provides allocation for each district according to its population density, and all socio-economic stratum are represented. Those who participated in the study, filled in a self-administered questionnaire that includes date of birth and date of the first menstrual period. We chose only girls who were between 18 and 24 years of age, (born between 1977 - 1983). For comparison, we also chose women above 40 years of age born before 1960, to find out if there is any difference at age of menarche between both group. In this study, 1823 girls aged between 18 - 24 (born between 1977 - 1983) responded to the questionnaire. The mean age of menarche for these girls was 13.79 ± 1.23 years. Minimum age of menarche was 9 years old and maximum age was 17 years old, only 0.1% having their menarche at age of 9 years and 1.2% having at age of 17 years, approximately 60% of this group having their menarche at the age of 13 and 14 years (**Table 1**). Seven hundred eighty-nine women with the age of 40 years and above, has the mean menarche age of 13.64 ± 1.32 years and a menarche age of 10-17 years. Only 0.9% having their menarche age at 10 years and 2% at age of 17 years, and approximately 60% at age of 13 and 14 years (**Table 1**). These results was not statistically significant and indicating that there are no change in menarche age in Jordanian girls now and 20 years ago. The calculated age at menarche in this study is comparable to the age at menarche reported on countries of similar culture and geographical location.[3-5] However, it is higher than the age at menarche reported from European and North American societies. The age at menarche for the 2 groups is not different, indicating that there is a trend toward a decrease in the age at menarche in the last few decades. The sampling procedure allow some bias to occur. The invited haphazard participation allows bias due to non-responders. In the second group, a bias due to recall could occur due to a longer period. The aim of this study was to determine the average age at menarche in Jordan, which is an important issue in school health planning among females. The presence of a decreasing trend with time is an important observation that require periodic revision of health plan. However, this was not demonstrated in this study.

Table 1 - Cumulative percentage of girls reporting onset of menarche presently aged between 18-24 and above the age of 40.

	N of girls having menarche each year																									
Age	**9 y**	**(%)**	**10 y**	**(%)**	**11 y**	**(%)**	**12 y**	**(%)**	**13 y**	**(%)**	**14 y**	**(%)**	**15 y**	**(%)**	**16 y**	**(%)**	**17 y**	**(%)**	**Total**	**(%)**	**Mean Age**
No. of girls with menarche age of 18-22 years	2	(0.1)	17	(0.9)	48	(2.6)	175	(9.5)	413	(22.6)	727	(39.8)	305	(16.7)	114	(6.2)	22	(1.2)	**1823**	(100)	13.79
No. of girls with menarche age of 40 years and above	0	(0.0)	7	(0.9)	26	(3.2)	99	(12.5)	256	(32.4)	214	(27.1)	116	(14.7)	55	(6.9)	16	(2)	**789**	(100)	13.64

Y - years

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References

1. Saar E, Shalev C, Dalal I, Sod-Moriah UA. Age at menarche: The influence of environmental condition. ***Int J Biometeorol*** 1988; 32: 33-35.
2. Manniche E. Age at menarche: Nicolai Edvard Ravn's data on 3385 women in mid-19th century Denmark. ***Ann Hum Biol*** 1983; 10: 79-82.
3. Attallah NL, Matta WM, El-Mankonshi M. Age at menarche of schoolgirls in Khartoum. ***Ann Hum Biol*** 1983; 10: 185-188.
4. Kak G, Auxiliadora de Sonata Cruz C, Velazquez-Melendez G. Secular trend in age at menarche for women born between 1920-1979 in Rio de Janeiro, Brazil. ***Ann Hum Biol*** 2000; 27: 423-428.
5. Floris G, Murgia E, Sancia GM, Sanna E. Age at menarche in Sardinia (Italy). ***Ann Hum Biol*** 1987; 14: 285-286.

Barbexaclone use in pregnancy

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Drug exposure in pregnancy is a complex problem for obstetricians. Epilepsy is the most common serious chronic neurological condition with a prevalence of 4-10/1000, and most of epileptic patients, including women of childbearing years (25% of total epileptic populations), require treatment with anti-epileptic drugs. Due to potential teratogenic side effects of the antiepileptic drugs, risks and benefits of the drugs must be assessed for both the mother and fetus.[1,2] Barbiturates and phenytoin are particularly associated with congenital heart malformations, facial clefts and some other malformations.[1,3] Barbexaclone is a levopropylhexedryn salt of barbiturate, and no available data are present in the literature about pregnant women, who used barbexaclone alone or in combination with any other drug. We are reporting on a patient who used barbexaclone for 2 years before pregnancy and during the first 10 weeks of the pregnancy. A physician, was unaware of the pregnancy, and prescribed the drug.

A 36-year-old caucasian woman, multigravida case had begun to use barbexaclone 300 mg/day and oxcarbazepine 600 mg/day, for 2 years before the pregnancy, due to epilepsy and continued to use both drugs until the end of week 10 of her pregnancy. When she became aware of pregnancy, she decided to quit taking barbexaclone with our recommendation, as there was no data regarding this drug regarding human or animal pregnancy. Oxcarbazepine 1200 mg/day was continued until the end of pregnancy. She did not use folic acid before or during the pregnancy. No clinical worsening in epilepsy was observed after withdrawal of barbexaclone. She had a history of one therapeutic abortion due to carbamazepine use and one spontaneous abortion. All obstetrical and ultrasonographical findings of the present pregnancy were found normal. Due to maternal serum alpha-fetoprotein was low (0.36 MoM; Multiples of Median) in the sixteenth week, the case underwent amniocentesis. No chromosomal abnormality was found by amniocentesis in the eighteenth week. The patient elected to have sectio delivery at 37 weeks of gestation and had a female infant (3.2 kg, 49 cm) with APGAR scores of 9 and 10, by an uncomplicated delivery. The case continued to use oxcarbazepine during the breast feeding period. The baby was followed for 2 years, and no major congenital abnormalities or minor malformations were observed based on physical examinations. Her physical, motor and mental development at 24 months of age was completely normal. Pregnancy in epileptic women is known to be associated with a higher risk of congenital malformations than non-epileptic pregnant women. The offspring of women with epilepsy are at increased risk for congenital malformation, but the impact of the various contributing factors remains unresolved.[1,2] Bokhari et al[4] reported strong association between the presence of coned epiphyses in feet and hands, but could not be considered a distinctive feature of teratogenicity of phenytoin and phenobarbital. The frequency of epileptic seizure may be altered by pregnancy and seizures may cause complications in pregnancy. Hypoxic conditions caused by epileptic seizures may affect the fetus in a serious or negative way.[1,2] All these issues must be considered in the treatment of epileptic pregnant women. The incidence of malformations due to the use of oxcarbazepine was found 8% and 5% in the drug group and control groups in mice, and this difference was not statistically significant.[5] Carbamazepine, phenytoin and valproic acid have been shown to be associated with teratogenicity, but a lower risk was observed with oxcarbazepine