

TEENAGE MARRIED PREGNANCY: ANALYSIS OF 400 PATIENTS IN SOUTHERN IRAN

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Abstract: Four hundred married teenage pregnant patients were interviewed at the time of admission for labour to the obstetrical service of Shiraz University Medical Centre, Shiraz, Iran. Their prenatal course, method of delivery, hospital course, and pregnancy outcome were reviewed. The majority of patients were not registered for prenatal care and had been referred to the Medical Centre after complicated labour had developed. Generally, these patients represented the lower socio-economic level, had minimal educational background, lacked information and motivation for contraception or prenatal care and in many cases were treated by poorly trained midwives as normal obstetrical patients, hence the high incidence of pregnancy complications, difficult deliveries and fetal morbidity and mortality. Forty per cent of the patients represented a changing social movement in Iran from rural nomadic existences to industrialization and urbanization.

Introduction

Many studies discuss pregnancies among the younger teenagers (under 15 years old) married and unmarried (1, 2, 4, 6, 9). These mothers represent an extreme high risk because their marital situations lack stability and often they are physically, mentally and financially incapable of taking care of themselves and their infants.

In our society, although, out of wedlock pregnancies are not prevalent, the majority of teenaged patients fail to attend prenatal clinics because they lack information and education as well as because the available clinics are not easily accessible to many who are rural residents. However, there is an evident reluctance to attend available clinics because of the lack of information. The outcome of pregnancy among teenagers, therefore, approaches the same complications and morbidity rates as out of wedlock pregnancies reported by other authors from other nations in the past.

The purpose of this study was to evaluate the effects of social factors and education deprivation on pregnancy outcome of the teenage population and to assess the possible preventable factors which led to pregnancy complications, difficulties in labour, and fetal survival.

Material and Methods

Four hundred pregnant teenagers who attended the obstetrical service of Shiraz University Medical Centre were studied over the twelve-month

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period from the first of March 1977 to the end of February 1978. All patients were interviewed by the authors at the time of admission for labour. Social history including place of residence, occupation, family income, educational status and types of contraception employed prior to pregnancy were recorded.

The medical records of teenage patients (considered to be under 19 years of age) attending the prenatal clinics were reviewed. All patients were followed closely during labour and hospital course.

Results

Incidence: During the twelve month study the total number of deliveries was 8,610 of which 3,186 were among teenage patients. Thus, more than one in three mothers had not reached their twentieth birthday prior to confinement.

Socio-Economic Conditions: Residence: 239 patients (59.75%) were from Shiraz or surrounding areas served by the Shiraz Medical Centre, and 161 (40.2%) came from more remote villages and rural areas in the Fars Province. Rural patients were transported great distances by a variety of vehicles. Many of the young women had been manipulated by local midwives and were physically and emotionally exhausted at the time of admission to the hospital.

Educational and occupational background: 212 patients lacked any formal education. Sixty-one per cent of this group were among those transferred from rural areas.

One hundred and fourteen patients (28%) received less than six years of formal education while 73 (18.25%) received 7-12 years and only one patient had over 12 years education.

Ninety-five per cent of patients listed their occupation as housewife. Eighty per cent of the villagers were engaged as domestic help in households or on farms. Many earned their livelihood at home through handicrafts such as the hand-woven carpets which are a main source of income for the nomadic tribes.

Family Income: The economic standards established for this report were: low income—10,000 rials or less per family per month; fair income—10,000 to 20,000 rials; good income—over 20,000 rials (about 70 rials are equivalent to \$ 1.00). The reported income of husbands of the patients in this study was 12% low, 67.4% fair, and 20.3% good, thus less than one family in five was considered to have an adequate or good income by the economic standards of the area.

Prenatal Care: Two hundred and ninety-one patients (75.2%) received no prenatal care and presented or were referred at the time of labour, 42 patients (10%) registered in the late third trimester, and 67 patients (16.7%) registered during first or second trimester and made prenatal visits.

The causes of such high incidence of unregistered patients are attributed to the fact that 52% of them live in remote rural areas, have transportation difficulties, lack information, and are unaware of the importance of

prenatal care and therefore are indifferent about seeking it. Furthermore, the type of services available is not enough, especially in the rural areas.

These data are summarized in Table 1.

Table 1.—Socio-economic Status of 400 Teenage Pregnancies

Socio-Economic	No.	Percentage
Residential Place:		
Urban	239	59.75
Rural	161	40.25
Formal education (yr):		
None	212	53.00
6 or less	114	28.50
7-12	73	18.25
More than 12	1	0.25
Family Income:		
Low	48	12.00
Fair	259	64.75
Good	93	23.25
Antenatal Care:		
(Time of registration)		
First trimester (8 visits)	21	5.25
Second trimester (5 visits)	46	11.50
Third trimester (3 visits)	42	10.50
Unregistered (—)	291	72.75

Obstetrical Findings: Age distribution: 93.75% of the patients were fifteen years or older at the time of their confinement (Table 2). In our study pregnancy in the early teens-fifteen years and younger is low because: (1) pregnancy out of wedlock is uncommon and if it occurs, abortion (although illegal) is usually done in private clinics; (2) the minimal legal age of marriage in Iran is eighteen years; (3) marriages among the higher socio-economic class are usually delayed until high school or college educations are completed.

Gravidity: The majority of our patients (71.2%) were primigravida (285 patients), 87 patients (21.7%) were gravida ii, 24 (6%) were gravida iii, and the remaining three (1%) were gravida iv, v, vi.

Methods of Contraception: Three hundred and two patients did not use any form of contraception (including conscientious timing of sexual exposure, withdrawal, rhythm, etc.). Of these, 80% conceived during the first six months of sexual activity, 95% within nine months, and 5% after the first year but before the eighteenth month of marriage, 42 patients practiced coitus interruptus for one to six months, 24 patients used condoms for three to twelve months, and 12 patients had IUD's for six to twenty-four months. Almost all the patients using IUD's and pills were multiparous. The majority of patients were unaware of the types or availability of contraception,

though some thought the contraceptive devices, especially the oral medication on IUD, would interfere with their fertility or chance of future pregnancy. The multiparas who desired contraceptive assistance did not know where to obtain the service, which is evidence of the need to provide the service in the hospital at the time of delivery.

Table 2.—Age Distribution at Delivery

Age (Years)	Primiparas		Multiparas	
	No.	Percentage	No.	Percentage
13	4	1.40	—	—
14	21	7.36	—	—
15	53	18.59	8	6.95
16	45	15.78	14	12.17
17	74	25.95	16	13.91
18	40	14.03	27	23.47
19	48	16.84	50	43.47
Total:	285 (71.25%)		115 (28.75%)	

Pregnancy Complications: Table 3 illustrates an incidence of antepartum complications much higher than that of patients aged 20 years or older seen in the clinic.

Table 3.—Pregnancy Complications

Complications	Number (N = 400)	Percentage
Abortion	20	5.00
Anemia	21 (137)	15.32
Bleeding (early)	30	7.50
Premature rupture of membranes	23	5.75
Premature labour	29	7.25
Toxemia of pregnancy	66	16.50
Pre-eclampsia	62	15.50
Eclampsia	4	1.00
Polyhydramnios	1	0.25
Bleeding (late)	3	0.75
Abruptio placenta	2	0.50
Placenta previa	1	0.25
Twin	3	0.75

Spontaneous Abortion: The incidence of abortion among the teenagers studied was 5%, which is one-third that experienced by women over 19 years of age, the overall incidence at our institution being 15%.

Anemia: Using the definition of hemoglobin of less than 10 grams per cent or hematocrit of less than 30, the incidence of anemia in our study was 15.32%. It must be emphasized that very few patients had received any supplemental iron.

Toxemia of Pregnancy: Of the 66 patients diagnosed as toxemic including four diagnosed as having eclampsia, only two had attended any prenatal clinic. We were unable to study weight gain during pregnancy because the majority of patients were admitted at the time of labour and most were unaware of their weight prior to pregnancy. We did not find a correlation between the incidence of toxemia and age in the under fifteen-year age group, but the incidence of Pre-eclampsia was much higher than that of patients registered in the clinics who were twenty years of age and older. In our institution the incidence of Pre-eclampsia in pregnancy is 6% in patients over twenty years of age, and 16.5% in the teenaged group studied.

Methods of Delivery: 244 patients (61.25%) had spontaneous vaginal delivery. Fifty-three patients (13.25%) were delivered by low forceps, and an additional 20 patients (5%) required mid forceps delivery with kielland forceps. The total incidence (18.25%) of forceps application is low in comparison to other reported series (2, 3, 9).

There were 21 (5.25%) breech presentations in the series; of which fourteen patients (66.6%) delivered abdominally and 7 (33.3%) were delivered via the vaginal route as assisted breech delivery.

A cesarean section rate of 19% is much higher than previously reported (1, 2, 7, 9, 11, 12) but reflects a change in attitude concerning delivery in teenagers. The overall cesarean section rate at Shiraz University Medical Centre is 5.2%¹⁰. This represents almost a four-fold increase as compared to the older population. The leading indication for primary abdominal delivery was similar to that of other series reported, namely, contracted pelvis and desultory labour (80.95%). Other indications for cesarean section were breech presentation (11%), transverse lie (3.17%), severe pre-eclampsia with failed induction (3.17%), and placenta previa (1.58%).

Delivery and Postpartum Complications: The average mean duration of the second stage of labour was 55 minutes, and that of the third stage was 5 minutes. The incidence of prolonged labour lasting more than 24 hours was 9.75%. In the 18-19 years-olds precipitate labour (less than three hours) occurred in 6.6% of patients. Uterine atony was seen as a frequent sequellae to prolonged labour. Six patients experienced postpartum bleeding episodes exceeding 500 ml. in a 24-hour period, and in four this was directly attributed to the uterine atony. Three of the postpartum bleeding problems were due to cervical lacerations.

Forty-eight patients (12%) sustained lacerations of the perineum and vaginal wall, of which 80% were of first degree.

Forty-five patients (11.5%) were noted to have a morbid postpartum course. This high incidence of morbidity was correlated directly to late

patient referral, unsterile manipulation by local midwives in rural areas, and poor personal hygiene (Table 4).

There were no maternal deaths in the study.

Table 4.—Postmartum Complications

Complications	Number (N = 400)	Percentage
Postmartum bleeding (500 cc):		
Uterine atony	4	1.00
Cervical lacerations	2	0.50
Vaginal lacerations	48	12.00
Vaginal wall haematoma	6	1.50
Retained placenta (manually removed)	6	1.50
Postmartum fever:		
Urinary tract infection	20	5.00
Endometritis	18	4.50
Pneumonia	1	0.25
Cesarean section wound infection	4	1.00
Undetermined causes	2	0.50

Outcome of Pregnancy

Prematurity: Lubchenko's curve was not assigned to the infants, so it was impossible to determine the degree of intrauterine growth retardation (IGR) as opposed to true prematurity, and differentiation could not be accurately evaluated in this series. For the study we included as premature all viable infants whose birth weights were more than 500 gms. but not exceeding 2500 gms.

The 18% prematurity rate of this study is similar to that of other reports (2, 5, 6, 8, 13). It seems that the high incidence of prematurity is essentially due to inadequate care plus the fact that the uterine blood supply is less well-developed in very young teenagers, especially those who conceive at menarche¹³

Congenital Anomalies: In the current study there was 0.5% incidence of congenital anomalies, which is less than has been recorded among the offspring of mothers delivering after their 20th birthday. There were two congenital anomalies noted in the group; one was a hydrocephalus and the other a trisomy 21 (mongolism).

Stillbirths: The nine fetal deaths (2.25%) in the group studied were associated with the following obstetric complications: (eclampsia)— one; prolonged labour with fetal asphyxia— two; abruption placenta—two, neglected transverse lie—one; hydro-cephalus requiring craniotomy and decompression of the fetal head—one; and the cause of death was undetermined in two others. The majority of these fetal deaths could have been prevented had they been referred to the Centre at an earlier stage of labour.

Neonatal deaths (death during the first 28 days) could be assessed only among those patients returning for follow-up visits in the postpartum clinics. There were twenty-three neonatal deaths which occurred during the course of hospitalization for an incidence of 5.75%.

Conclusion

The teenage population studied accounts for two of every five patients delivered on the obstetrics service at Shiraz University Medical Centre, Iran. This study assessed the social, educational, and economic factors which are responsible for delays of this high risk group in receiving care. Lack of adequate information and consequently ineffective or non-use of contraceptive measures results in inappropriate spacing of pregnancies as illustrated by those immediately following marriage before economic stability and the number of repeat pregnancies among the teenagers. Educational status of teenagers pertaining to personal hygiene, contraception, and health (Obstetrical) services needs improvement through health education programme offered earlier in the schools, rural facilities, and better use of media such as posters, free literature, radio, and newspapers. The lack of prenatal clinics and well-trained and qualified midwives in the rural areas in addition to the far distances patients are expected to travel for care contribute to an overcrowded situation in existing prenatal clinics which are primarily located in the larger cities. This obviously had detracted from the excellence of professional care that can be given. The large number of patients per doctor results in unnecessary delays and waiting periods for patients, who become disenchanted by the system. The problem most urgently in need of change is education of midwives and students in order to combat late referral of patients by these less skilled persons who do not anticipate or recognize early clinical indications of obstetrical complications. Obstetricians must assume the role of health educator to young women regarding nutrition, personal hygiene, reproductive functioning, contraception, and family Planning. It is suggested that such programme be initiated in the rural villages. Such education and advice to postpone first pregnancies and sequential pregnancy spacing would help improve maternal health and reduce unfavourable statistical indicators of premature birth, fetal, neonatal, and infant mortality and morbidity, at least until such time when more accessible prenatal and obstetrical clinics become available to this population.

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