International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Tachdjian A et al. Int J Reprod Contracept Obstet Gynecol. 2024 Mar;13(3):540-547
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20240452

Original Research Article

Prevalence of fetomaternal outcome with advanced maternal age in Lebanon

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Received: 05 January 2024
Revised: 02 February 2024
Accepted: 03 February 2024

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ABSTRACT

Background: Maternal age affects risk, varying with mother's parity. This study aimed to investigate advanced maternal age (35-39 and ≥40) and its impact on fetomaternal outcomes in Lebanese women.
Methods: A retrospective review of 300 charts from Lebanese women who had vaginal/cesarean deliveries between 1999-2019. Categorization: under 35 (61%), 35-39 (25%), ≥ 40 (14%). Analysis via SPSS v23.
Results: Age range 17-50, average 32.31±6.72 years. Normal conception highest in under 35 (96.7%); highest IVF rate in ≥ 40 (26.2%). Multiparity frequent in ≥ 40. Fetal complications most common in ≥ 40 (50%). Maternal complications peak in ≥ 40 (57.1%).
Conclusions: Advanced maternal age significantly impacts mother and fetus, requiring comprehensive care throughout pregnancy.

Keywords: Advanced maternal age, Delivery, Maternal-fetal complication, Pelvic ultrasound, Pregnancy

INTRODUCTION

The global trend indicates a rise in maternal age at childbirth. Defined as 35 or older, advanced maternal age (AMA) is becoming more common. In several Western nations, the average age for first-time mothers has surpassed 30 1. This shift is not confined to developed nations; countries like Lebanon are also witnessing this trend.[1] Factors such as increased life expectancy, better education, career opportunities, economic pressures, birth control advancements, higher divorce rates, and contraceptive awareness have contributed to this change.[1-3]

In high-income countries, there's an upward trend of pregnancies at AMA. For instance, in England and Wales in 2013, 20% of births were to women aged 35 or older, and 4% to those over 40.[4] This trend encompasses not just women continuing childbearing but also those delaying it due to subfertility or lifestyle choices.[5] Assisted reproductive technology (ART) has been instrumental in aiding these women.[5] Numerous epidemiological studies have connected AMA with complications such as fetal growth restriction, preeclampsia, placental abruption, preterm birth, and still birth. Notably, these heightened risks aren't necessarily tied to other maternal health issues. Additionally, AMA has been associated with a higher likelihood of cesarean deliveries.[6-11]

METHODS

Study design and setting

This research was a two-year, multicenter retrospective study conducted in four hospitals in Lebanon. The study reviewed the medical records of 300 Lebanese women who delivered between 1999 and 2019. These records were accessed with permission from each hospital's medical director, ensuring a comprehensive review of demographics (cited in Table 1), pregnancy history, and delivery mode.

Study population

The study population consisted of women who delivered during the specified period, with the selection process categorizing them into three age groups: Group 1 (<35 years), Group 2 (35-39 years), and Group 3 (≥40 years).

Inclusion criteria

Inclusion criteria embraced a variety of demographics and maternal health backgrounds (details provided in demographic characteristics, Table 1).

Exclusion criteria

Exclusions were made for cases involving infertility issues, foreign nationality, unhealthy weight, or incomplete data records.

Ethical approval for this study was obtained from the Sacre Coeur Hospital's Institutional Review Board (IRB). To protect privacy, confidentiality was maintained through the use of study codes for all participants.

Data collection procedure

Data collection involved a detailed review of hospital charts, focusing on demographic information (Table 1), pregnancy history, and the mode of delivery for each participant. This process was facilitated by the support of the medical directors at each hospital, ensuring accurate and comprehensive data retrieval.

Statistical analysis

The statistical analysis was performed using IBM SPSS Statistics version 23. Techniques employed included chi-square tests for categorical data, one-way ANOVA for continuous variables, and Bonferroni post hoc analysis to manage multiple comparisons. Data were presented in various formats: categorical data as frequencies and percentages (clinical characteristics in Tables 2 and 3), and continuous data as means and standard deviations (SDs). The analysis explored differences across maternal age groups in aspects such as IVF rates (Figure 1, 2), delivery methods, and hereditary family diseases with no significant difference found between maternal age groups (Table 7).

RESULTS

The study meticulously examines data from 300 women divided into three distinct groups: Group 1, consisting of 183 women (61%), Group 2, including 75 women (25%), and Group 3, comprising 42 women (14%), within an age range of 17-50 years and an average age of 32.31±6.72 years. The analysis reveals insightful trends and distinctions among these groups across various parameters, supported by detailed figures that illustrate the findings.

Table 1: Demographic clinical characteristics.

		Total (N=300) n (%)
Weight (kg)	Valid answers (n)	300
	Mean ± SD	75.32±11.45
	Min - Max	40 - 110
Weight gain (Kg)	Valid answers (n)	300
	Mean ± SD	11.13±3.46
	Min - Max	3 - 28
Number of total pregnancies	Valid answers (n)	300
	Mean ± SD	2.30±1.58
	Min - Max	0 - 12
Number of living babies	Valid answers (n)	300
	Mean ± SD	1.60±0.94
	Min - Max	0 - 5
Number of miscarriage	Valid answers (n)	300
	Mean ± SD	0.53±1.10
	Min - Max	0 - 10
Number of stillbirth	Valid answers (n)	300
	Mean ± SD	0.16±0.43
	Min - Max	0 - 3
Occupation	Non-worker	77 (25.7)
	Worker	223 (74.3)
Marital status	Non-married	15 (5.0)
	Married	285 (95.0)
Smoker	No	215 (71.7)
	Yes	85 (28.3)
Alcoholic	No	266 (88.7)
	Yes	34 (11.3)

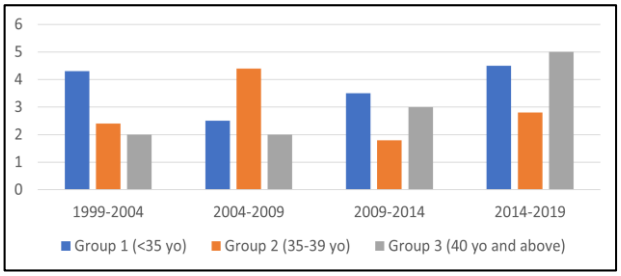

Figure 1: Variation of maternal age within 5 years interval.

In the domain of IVF rates and maternal age over the years, Group 3 emerged as having the highest IVF rates across all examined periods. This section is elucidated in Figures 1 and 3, where significant differences between the groups are highlighted, particularly between Group 3 and Group 1, with a noted significance level (p=0.003).

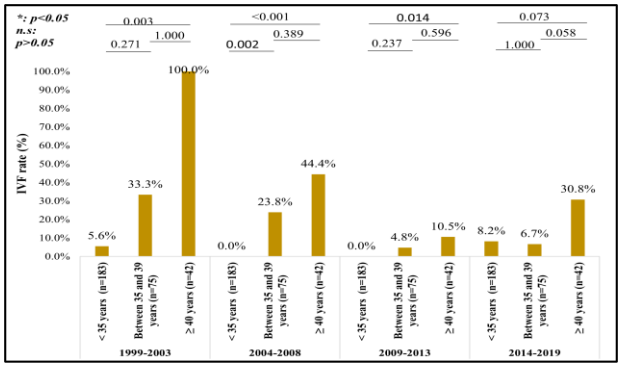

Figure 2: Rate of IVF by maternal age groups within years.

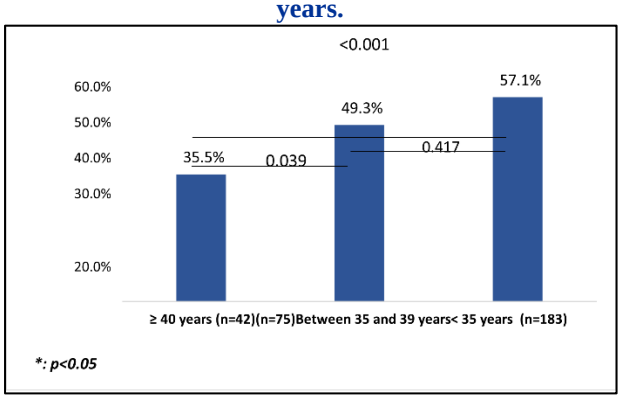

Figure 3: Rate of maternal complications during pregnancy by maternal age groups.

The investigation into maternal age trends in multiparity, showcased, reveals that multiparous women are consistently older than primiparous women. An increase in primiparous rates among younger women contrasted with a decrease among women over 40 is depicted, underscoring changing trends in maternal age and parity.

Delivery methods trends through the years, show a rising trend in caesarean section rates over time, juxtaposed with a decline in normal vaginal delivery (NVD) rates, signalling evolving preferences or necessities in delivery methods.

Demographic characteristics of the participants are summarized in Table 1, detailing the average weight, weight gain during pregnancy, number of pregnancies, living babies, miscarriages, and stillbirths, along with employment status, marital status, smoking, and alcohol consumption habits. This comprehensive demographic snapshot provides a foundational understanding of the study population's baseline characteristics.

Table 2: Clinical characteristics.

	Valid answers (n)	300
Fetal age (weeks)	Mean±SD	35.70±7.05
	Min - max	8 - 41
Fetal sex	Boy	147 (49.0)
	Girl	141 (47.0)
	Unknown	12 (4.0)
Methods of conception	Normal	274 (91.3)
	IVF	26 (8.7)
Delivery mode	Normal vaginal delivery	112 (37.3)
	C-section	164 (54.7)
	Dilatation and curettage	17 (5.7)
	Urgent hysterotomy	7 (2.3)
Type of C-section	Urgent	42 (25.6)
	Scheduled	122 (74.4)
APGAR at 1min	Valid answers (n)	300
	Mean±SD	8.02±2.83
	Min - Max	0 - 10
APGAR 5 min	Valid answers (n)	300
	Mean±SD	8.37±2.87
	Min - Max	0 - 10
Menarche	Valid answers (n)	300
	Mean±SD	12.16±1.02
	Min - Max	10 - 15

Clinical characteristics, outlined in Tables 2 and 3, delve into conception methods, delivery methods, the offspring's gender distribution, fetal age, APGAR scores, and the average age at menarche. Notably, Group 3 is characterized by the highest rates of IVF, C-sections, and the number of living babies and miscarriages, although no significant differences were observed across groups in several maternal and fetal health indicators.

The section on medical history and medication use, detailed in Tables 4 and 5, highlights the prevalence of various medical conditions and the medication intake during pregnancy, offering insight into the health landscape of the participating women.

Fetal and maternal complications are explored through Figures 3, providing statistical evidence of the incidence and distribution of complications across different maternal age groups, with notable findings regarding gestational hypertension, DVT, pre-eclampsia, and placental abruption.

The study also examines the influence of lifestyle factors on pregnancy outcomes, specifically addressing the potential impacts of smoking and alcohol consumption on the types of complications observed, revealing no statistically significant associations.

This analysis, enriched by the citation of specific groups and figures, offers a nuanced understanding of the intricate

dynamics at play in maternal health, emphasizing the critical interplay between maternal age, lifestyle factors, and clinical outcomes. The detailed examination of these aspects underscores the importance of personalized prenatal care and the need for ongoing research to optimize maternal and fetal health outcomes.

Table 3: Demographic and clinical characteristics by age group.

Age groups		Group 1 < 35 years (n=183)	Group 2 Between 35 and 39 years (n=75)	Group 3 >= 40 years (n=42)	p-value
Weight (kg)†	Valid answers (n)	183	75	42	0.426
	Mean ± SD	74.64±10.93	76.20±11.67	76.71±13.24	
	Min - Max	50 - 102	48 - 95	40 - 110	
Weight gain (kg) †	Valid answers (n)	183	75	42	0.179
	Mean ± SD	10.89±3.70	11.23 ± 2.64	11.98±3.59	
	Min - Max	3 - 28	6 - 18	5 - 25	
Fetal age (weeks) †	Valid answers (n)	183	75	42	0.889
	Mean ± SD	35.56±7.93	35.81±5.77	36.12±4.77	
	Min - Max	8 - 41	9 - 40	9 - 40	
Fetal sex	Boy	93 (50.8)	37 (49.3)	17 (40.5)	0.104
	Girl	79 (43.2)	37 (49.3)	25 (59.5)	
	Unknown	11 (6.0)	1 (1.3)	0 (0.0)	
Delivery mode	Normal vaginal delivery	79 (43.2)[a]	24 (32.0)[a,b]	9 (21.4)[b]	0.001*
	C-section	88 (48.1)[a]	44 (58.7)[a,b]	32 (76.2)[b]	
	Dilatation and curettage	14 (7.7)[a]	2 (2.7)[a]	1 (2.4)[a]	
	Urgent hysterotomy	2 (1.1)[a]	5 (6.7)[b]	0 (0.0)[a,b]	
Type of C-section	Urgent	16 (18.2)[a]	10 (22.7)[a]	16 (50.0)[b]	0.002*
	Scheduled	72 (81.8)[a]	34 (77.3)[a]	16 (50.0)[b]	
Methods of conception	Normal	177 (96.7)[a]	66 (88.0)[b]	31 (73.8)[b]	<0.001*
	IVF	6 (3.3)[a]	9 (12.0)[b]	11 (26.2)[b]	
Number of living babies†	Valid answers (n)	183	75	42	0.038*
	Mean ± SD	1.50±0.86[a]	1.72±1.07[a,b]	1.86±1.00[b]	
	Min - Max	0 - 4	0 - 5	1 - 4	
Number of miscarriage†	Valid answers (n)	183	75	42	<0.001*
	Mean ± SD	0.37±0.75[a]	0.60 ± 0.94[a]	1.12±2.04[b]	
	Min - Max	0 - 5	0 - 4	0 - 10	
Number of stillbirth†	Valid answers (n)	183	75	42	0.021*
	Mean ± SD	0.12±0.37[a]	0.28±0.58[b]	0.12±0.33[a,b]	
	Min - Max	0 - 2	0 - 3	0 - 1	
APGAR at 1min†	Valid answers (n)	183	75	42	0.417
	Mean ± SD	7.96±2.88	7.87±3.06	8.55±2.10	
	Min - Max	0 - 10	0 - 10	0 - 10	
Apgar 5 min†	Valid answers (n)	183	75	42	0.355
	Mean ± SD	8.31±2.92	8.20±3.13	8.95±2.08	
	Min - Max	0 - 10	0 - 10	0 - 10	
Menarche†	Valid answers (n)	183	75	42	0.017*
	Mean ± SD	12.04±1.04[a]	12.44±0.95[b]	12.19±0.97[a,b]	
	Min - Max	10 - 15	10 - 15	11 - 14	
Occupation	Non-worker	65 (35.5)[a]	8 (10.7)[b]	4 (9.5)[b]	<0.001*
	Worker	118 (64.5)[a]	67 (89.3)[b]	38 (90.5)[b]	
Marital status	Non-married	8 (4.4)	2 (2.7)	5 (11.9)	0.073
	Married	175 (95.6)	73 (97.3)	37 (88.1)	
Smoker	No	132 (72.1)	54 (72.0)	29 (69.0)	0.921
	Yes	51 (27.9)	21 (28.0)	13 (31.0)	
Alcoholic	No	157 (85.8)	68 (90.7)	41 (97.6)	0.076
	Yes	26 (14.2)	7 (9.3)	1 (2.4)	
Governorate	Akkar	1 (0.5)	1 (0.1)	1 (2.4)	0.244
	Baalback- Hermel	3 (1.6)	3 (4.0)	1 (2.4)	

Continued.

Age groups		Group 1 < 35 years (n=183)	Group 2 Between 35 and 39 years (n=75)	Group 3 >= 40 years (n=42)	p-value
	Beirut	38 (20.8)	6 (8.0)	9 (21.4)	
	Beqaa	10 (5.5)	5 (6.7)	5 (11.9)	
	Mount Lebanon	98 (53.6)	45 (60.0)	21 (50.0)	
	Nabatieh	15 (8.2)	5 (6.7)	0 (0.0)	
	North Lebanon	10 (5.5)	6 (8.0)	1 (2.4)	
	South Lebanon	8 (4.4)	4 (5.3)	4 (9.5)	

p-value was calculated using Chi-square, p-value was calculated using One-way Anova and Bonferroni test

Table 4: Past medical history by age groups.

Age groups		Group 1 < 35 years (n=183)	Group 2 between 35 and 39 years (n=75)	Group 3 ≥ 40 years (n=42)	p-value
Past medical history	No	139 (76.0)[a]	49 (65.3)[a,b]	23 (54.8)[b]	0.014*
	Yes	44 (24.0)[a]	26 (34.7)[a,b]	19 (45.2)[b]	
Asthma	No	181 (98.9)	74 (98.7)	41 (97.6)	0.806
	Yes	2 (1.1)	1 (1.3)	1 (2.4)	
Hepatitis	No	182 (99.5)	74 (98.7)	42 (100.0)	0.662
	Yes	1 (0.5)	1 (1.3)	0 (0.0)	
Hypertension	No	183 (100.0)[a]	66 (88.0)[b]	39 (92.9)[b]	<0.001*
	Yes	0 (0.0)[a]	9 (12.0)[b]	3 (7.1)[b]	
Diabetes	No	179 (97.8)	75 (100.0)	42 (100.0)	0.274
	Yes	4 (2.2)	0 (0.0)	0 (0.0)	
Gestational diabetes	No	182 (99.5)	75 (100.0)	42 (100.0)	0.726
	Yes	1 (0.5)	0 (0.0)	0 (0.0)	
Dyslipidemia	No	183 (100.0)	73 (97.3)	41 (97.6)	0.092
	Yes	0 (0.0)	2 (2.7)	1 (2.4)	
Dysthyroidism	No	177 (96.7)	74 (98.7)	42 (100.0)	0.359
	Yes	6 (3.3)	1 (1.3)	0 (0.0)	
Placental abruption	No	182 (99.5)	74 (98.7)	42 (100.0)	0.662
	Yes	1 (0.5)	1 (0.1)	0 (0.0)	
Pre-eclampsia	No	183 (100.0)[a]	75 (100.0)[a,b]	40 (95.2)[b]	0.002*
	Yes	0 (0.0)[a]	0 (0.0)[a,b]	2 (4.8)[b]	
Irregular cycle	No	182 (99.5)	75 (100.0)	42 (100.0)	0.726
	Yes	1 (0.5)	0 (0.0)	0 (0.0)	
Lower limbs varices	No	183 (100.0)[a]	70 (93.3)[b]	41 (97.6)[b]	0.002*
	Yes	0 (0.0)[a]	5 (6.7)[b]	1 (2.4)[b]	
Lupus	No	182 (99.5)	74 (98.7)	42 (100.0)	0.662
	Yes	1 (0.5)	1 (0.1)	0 (0.0)	
PCOS	No	176 (96.2)	75 (100.0)	42 (100.0)	0.101
	Yes	7 (3.8)	0 (0.0)	0 (0.0)	
Recurrent abortion	No	181 (98.9)[a]	72 (96.0)[a]	36 (85.7)[b]	<0.001*
	Yes	2 (1.1)[a]	3 (4.0)[a]	6 (14.3)[b]	
RA	No	181 (98.9)	74 (98.7)	41 (97.6)	0.806
	Yes	2 (1.1)	1 (1.3)	1 (2.4)	
History of previous c-section	No	142 (77.6)	56 (74.7)	28 (66.7)	0.330
	Yes	41 (22.4)	19 (25.3)	14 (33.3)	

p-value was calculated using Chi-square test or Fisher exact test, *: p-value<0.05 was considered as statistically significant

Table 5: Familial hereditary diseases by age groups.

Age groups		< 35 years (n=183)	Between 35 and 39 years (n=75)	>= 40 years (n=42)	p-value
Familial hereditary diseases	No	132 (72.1)	53 (70.7)	30 (71.4)	0.972
	Yes	51 (27.9)	22 (29.3)	12 (28.6)	
Cardiovascular disease	No	168 (91.8)	63 (84.0)	39 (92.9)	0.133
	Yes	15 (8.2)	12 (16.0)	3 (7.1)	

Continued.

Age groups		< 35 years (n=183)	Between 35 and 39 years (n=75)	>= 40 years (n=42)	p-value
Diabetes mellitus	No	158 (86.3)	68 (90.7)	35 (83.3)	0.482
	Yes	25 (13.7)	7 (9.3)	7 (16.7)	
Hypertension	No	147 (80.3)	61 (81.3)	35 (83.3)	0.901
	Yes	36 (19.7)	14 (18.7)	7 (16.7)	
Dyslipidemia	No	179 (97.8)	75 (100.0)	41 (97.6)	0.427
	Yes	4 (2.2)	0 (0.0)	1 (2.4)	

Table 6: Fetal complications and anomalies during pregnancy by age groups.

		Age groups			
		< 35 years (n=183)	**Between 35 and 39 years (n=75)**	**>= 40 years (n=42)**	**p-value**
Fetal complications during pregnancy	No	135 (73.8)[a]	51 (68.0)[a,b]	21 (50.0)[b]	0.011*
	Yes	48 (26.2)[a]	24 (32.0)[a,b]	21 (50.0)[b]	
Trisomy	No	175 (95.6)	69 (92.0)	41 (97.6)	0.336
	Yes	8 (4.4)	6 (8.0)	1 (2.4)	
Hydrops	No	182 (99.5)	73 (97.3)	42 (100.0)	0.234
	Yes	1 (0.5)	2 (0.2)	0 (0.0)	
Malformation	No	183 (100.0)	74 (98.7)	42 (100.0)	0.222
	Yes	0 (0.0)	1 (1.3)	0 (0.0)	
IUFD	No	171 (93.4)	71 (94.7)	39 (92.9)	0.910
	Yes	12 (6.6)	4 (5.3)	3 (7.1)	
IUGR	No	183 (100.0)	74 (98.7)	41 (97.6)	0.166
	Yes	0 (0.0)	1 (1.3)	1 (2.4)	
Fetal distress	No	175 (95.6)[a]	69 (92.0)[a,b]	35 (83.3)[b]	0.018*
	Yes	8 (4.4)[a]	6 (8.0)[a,b]	7 (16.7)[b]	
Oligoamnios	No	181 (98.9)	74 (98.7)	41 (97.6)	0.806
	Yes	2 (1.1)	1 (1.3)	1 (2.4)	
Placenta previa	No	183 (100.0)[a]	75 (100.0)[a]	39 (92.9)[b]	<0.001*
	Yes	0 (0.0)[a]	0 (0.0)[a]	3 (7.1)[b]	
Prematurity	No	175 (95.6)	74 (98.7)	39 (92.9)	0.282
	Yes	8 (4.4)	1 (1.3)	3 (7.1)	

Table 7: Hereditary family diseases with no significant difference found between maternal age groups.

Age groups		< 35 years (n=183)	Between 35 and 39 years (n=75)	>= 40 years (n=42)	p-value
Gestational diabetes	No	178 (97.3)	71 (94.7)	42 (100.0)	0.253
	Yes	5 (2.7)	4 (5.3)	0 (0.0)	
Gestational HTN	No	182 (99.5)[a]	71 (94.7)[b]	42 (100.0)[a,b]	0.016*
	Yes	1 (0.5)[a]	4 (5.3)[b]	0 (0.0)[a,b]	
DVT	No	183 (100.0)	75 (100.0)	41 (97.6)	0.046
	Yes	0 (0.0)	0 (0.0)	1 (2.4)	
Pre-eclampsia	No	173 (94.5)[a,b]	74 (98.7)[b]	37 (88.1)[a]	0.050*
	Yes	10 (5.5)[a,b]	1 (1.3)[b]	5 (11.9)[a]	
Hellp syndrome	No	180 (98.4)	74 (98.7)	39 (92.9)	0.083
	Yes	3 (1.6)	1 (1.3)	3 (7.1)	
Hyperemesisgravidar um	No	182 (99.5)	74 (98.7)	41 (97.6)	0.529
	Yes	1 (0.5)	1 (0.1)	1 (2.4)	
Incomplete/missed abortion	No	173 (94.5)	69 (92.0)	42 (100.0)	0.180
	Yes	10 (5.5)	6 (8.0)	0 (0.0)	
PROM	No	181 (98.9)	75 (100.0)	41 (97.6)	0.453
	Yes	2 (1.1)	0 (0.0)	1 (2.4)	
Placental abruption	No	181 (98.9)[a]	75 (100.0)[a]	39 (92.9)[b]	0.009*
	Yes	2 (1.1)[a]	0 (0.0)[a]	3 (7.1)[b]	
Placenta previa	No	181 (98.9)	75 (100.0)	42 (100.0)	
	Yes	2 (1.1)	0 (0.0)	0 (0.0)	

Continued.

DISCUSSION

The study on 300 Lebanese women, aged between 17 and 50 years, with an average age of 32.31, provides a significant contribution to the understanding of reproductive health trends and outcomes within Lebanon, highlighting several key areas of maternal and fetal health. This discussion interprets the study's findings in relation to previous research, offering a contextual understanding of its contributions, limitations, and implications for future care and research.

Higher IVF rates in older women

The study's finding of higher IVF rates among women over 40 is consistent with global research indicating declining ovarian reserves as a common cause for increased reliance on assisted reproductive technologies (ART) in this age group.[14-16] This aligns with broader demographic trends of delayed childbearing, reflecting both personal choice and societal shifts.

Maternal age and pregnancy outcomes

An observed increase in maternal age, especially among multiparous women, mirrors global trends, indicating a shift towards later childbearing.[16] Interestingly, this study did not find significant variations in maternal weight and weight gain across age groups, presenting a contrast to existing literature that often links obesity with adverse birth outcomes.[19] This divergence might suggest population-specific factors that mitigate the impact of maternal obesity on pregnancy outcomes or differences in lifestyle and healthcare access in Lebanon.

Maternal and fetal complications

A significant link was noted between gestational hypertension and weight gain, aligning with the broader literature on the impact of maternal weight on pregnancy complications.[20] The observation of fewer complications in women with a past medical history might reflect the effectiveness of proactive healthcare and monitoring in mitigating risk factors for these women.[21] Fetal distress rates being highest in the oldest age group, yet declining over time, likely reflects advancements in medical interventions and prenatal care.[23]

Maternal age as a risk factor

The association of advanced maternal age with specific complications such as gestational diabetes, pre-eclampsia, and gestational hypertension, particularly in the oldest age group, underscores the heightened risk profile for older pregnant women.[24,25] This finding is critical for healthcare providers in tailoring prenatal care to address these increased risks.

Deep venous thrombosis

Highlighting deep venous thrombosis (DVT) as a major concern during pregnancy that can lead to pulmonary embolism, the primary cause of maternal mortality in developed countries, emphasizes the critical importance of anticoagulation management.[27] This points to the need for vigilant screening and management of thrombotic risk factors in pregnant women.

Impact and limitations of the study

By providing insights into the increasing maternal age and associated complications within the Lebanese context, this study underscores the importance of informed counseling and proactive clinical surveillance.[28] However, the study's retrospective nature and reliance on hospital-based data collection may limit its generalizability. The challenges faced, including database access during the COVID-19 pandemic and missing socioeconomic and medical data, highlight the difficulties in conducting comprehensive retrospective research.

Study perspectives and multidisciplinary care

The emphasis on understanding the risks associated with advanced maternal age pregnancies and promoting evidence-based counseling for older mothers-to-be is crucial. Recognizing long-term health risks post-pregnancy is essential for ensuring timely interventions and comprehensive care. Addressing maternal and fetal care requires a collaborative, multidisciplinary approach, incorporating comprehensive antepartum care and early detection of potential issues, reflecting a holistic perspective on prenatal healthcare.

CONCLUSION

In conclusion, this study contributes valuable insights into maternal and fetal health trends in Lebanon, with implications for healthcare practice and policy. It highlights the need for targeted research and intervention strategies to address the challenges of advanced maternal age, the use of IVF, and the management of pregnancy-related complications, ensuring the health and well-being of mothers and their children. This study underscores the significant impact of advanced maternal age on both maternal and fetal health outcomes, highlighting the need for targeted healthcare strategies and informed decision-making in managing pregnancies in older women.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by Institutional Review Board of the Sacre Coeur Hospital, Lebanon

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Cite this article as: Tachdjian A, Daoud J, Hassan J, Hajj N, Moussa M, Beirut JA, et al. Prevalence of fetomaternal outcome with advanced maternal age in Lebanon. Int J Reprod Contracept Obstet Gynecol 2024;13:540-7.