

## The Effect Of Folic Acid On The Newborn Of Pregnant Women At Al-Najaf Government

تأثير حامض الفوليك على المواليد للنساء الحوامل في محافظة النجف الأشرف

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### الخلاصة

**الهدف:** تم إجراء دراسة تحليلية مقطعية لغرض التعرف على تأثير حامض الفوليك على مواليد النساء الحوامل في محافظة النجف الأشرف وإيجاد الفروق المعنوية ذات الدلالة الإحصائية بين العوامل المرتبطة بالموضوع مع حامض الفوليك.

**المنهجية:** اختيرت عينة غرضية مكونة من (1054) امرأة حامل اللاتي يتعاطين حامض الفوليك بجرعة (5mg) طيلة مدة الحمل من المراجعات لمستشفى الزهراء للنسائية والأطفال في محافظة النجف الأشرف، جمعت المعلومات بطريقة المقابلة الشخصية مع الأمهات. صممت الاستمارة الاستبائية والتي تكونت من (3) أجزاء شملت المعلومات الديمغرافية للعينة، المعلومات الإنجابية للعينة، معلومات متعلقة بحامض الفوليك والتشوهات الخلقية، وتم استخدام الإحصاء الوصفي والاستنتاجي لتحليل البيانات.

**النتائج:** تشير نتائج الدراسة ان النسبة المئوية للولادات الطبيعية (38.9%) ، بينما كانت النسبة (58.8%) للولادات القيصرية. في الولادة الطبيعية كانت النسبة المئوية للولادات المشوهة (1.2%)، بينما كانت النسبة المئوية (0.9%) للولادات المشوهة في الولادة القيصرية واللاتي يتعاطين حامض الفوليك.

تشير نتائج الدراسة ان معظم النساء هن من الفئة العمرية (21-25) سنة ومعظمهن (640) امرأة ربوات بيوت، كذلك وجود فروقات معنوية بين تناول الفوليك اسد والتشوهات الخلقية.

**الاستنتاجات:** أستنتجت الدراسة ان هناك دلالة احصائية ذات مستوى معنوي بين تناول الفوليك اسد والتشوهات الخلقية.

**التوصيات:** وطبقا للنتائج اوصت الدراسة بالتاكيد على العناية المبكرة خلال فترة الحمل والتتقيف الصحي وتحسين نوعية الخدمات المقدمة للامهات خلال فترة الحمل على ان يأخذ الفريق الصحي دوره في هذا المجال لتقليل نسبة التشوهات الخلقية للأجنة وذلك بتناول حامض الفوليك اسد.

### Abstract

**Objective:** Across section analytic study was carried out to identify the effect of folic acid on birth of pregnant women at Al-Najaf government and to determine the statistical significant differences between folic acid and some variables.

**Methodology:** A purposive sample of (1054) of pregnant women was selected from Al-Zahra maturity pediatric hospital, data was collected through the interview of women. Question forma was designed and contained (3) parts demographic variables, reproductive variables and variables related to effect of folic acid.

**Results:** Descriptive and in fevential statistical procedures were used to analyze the data. The result of the study revealed that the age of women was ranged between (21-25) years and the highest percentage of them house wife (640).The result indicate that a significant association between takes folic acid and congenital anomalies.

The present study was revealed that the percent of normal deliveries (38.9%), while in cesarean sections (58.8%). In normal deliveries the percent of congenital anomalies was (1.2%), and the percent of congenital anomalies in cesarean sections was (0.9%).

**Conclusion:** The study concluded that there was a significant difference between taking folic acid and congenital anomalies

**Recommendation:** According to these finding it is recommended to emphasize on prenatal care early as possible and education improve health services presented to the mother during pregnancy that the health team must take the role in reducing the incidence of congenital anomalies by taking folic acid.

**Keywords:** Folic acid, Congenital anomalies in pregnant women.

## INTRODUCTION

The use of folic acid has been one of the most important developments in preventing birth defects. An increased intake of folic acid in the periconceptional period reduces the risk of neural tube defects (NTDs) by at least 50%, and other major congenital malformations (MCMs) (1). The previous studies was estimated that at least (5%) of babies are born with some serious congenital anomaly one Of these five babies in 100, two or three will have anomalies that can be recognized prenatally by a non invasive screening test, through invasive diagnostic testing, or at birth, while the other two babies will have developmental or functional anomalies recognized during the first year of their life (2).

The fetus rapidly develops spine and nerve cells in the first few weeks of pregnancy. Inadequate blood levels of folate at this crucial time increase the risk of the babies spine developing a 'neural tube defect', resulting in spinal malformation called spina bifida (3,4). The incidence varies from (1/100) live births in certain regions of China to about (1/5000) live birth in Scandinavian countries, to (2.88 per 1000) births in Gorgan and North of Iran (5). Evaluating such trends in conjunction to those of Neural Tube Defects (NTDs) can help assess the potential protective role of folic acid on a wider range of congenital anomalies (6). Folic Acid supplementation of approximately (400) micrograms per day ( $\mu\text{g}/\text{d}$ ) from fortified foods, supplements, or both, was recommended for all women at risk of pregnancy, during lactating they need 260  $\mu\text{g}$ . The prescription of a higher dose of folic acid (4 mg/day) preconceptionally was associated with a (71%) reduction in NTDs (3). The form of folic acid occurring naturally in food is called (folate), the good sources' of folic acid spinach, beans, beef extracts, organs, shell fish, peas and liver (7).

This study was conducted to determine the effect of folic acid use on the risk of congenital anomalies in newborn of women.

## MATERIAL AND METHODS

The present study was involved (1054) pregnant women during three month December, January and February at years (2012,2013), came into Al-Zahra maternity and pediatric teaching hospital at Al-Najaf government. These pregnant women age range between (16-45), examined by specialist physicians to determine gestational age and administration of medication such as folic acid. Questionnaire format was designed and containt (3) part, demographic variables, reproductive variables and variables related to effect of folic acid.

The pregnant women take folic acid during the period of gestation at dose 5 mg/ daily, except the women was suffer from epilepsy, diabetes mellitus , these women took 10 mg of folic acid daily.

Chi-square test and analysis of variance were used for statistical analysis of data (8).

## RESULTS:

**Table 1: Distribution of study sample according to the demographic data.**

Age	NQ.	Occupation statues	NQ.
16-20	217	Housekeeper	640
21-25	241	Employed	414
26-30	288		
31-35	183		
36-40	67		
41-45	56		

Table (1) show the Housekeeper are more than the employed.

**Table 2: Distribution of study sample according to Reproductive data.**

Gravida	Primigravida	Congenital anomalies		Type of delivery	
3	2	yes	23	N.V.D.	424
2	1	No	1031	C.S.	630
1	0				
5	4				
4	3				
6	5				

\*N.V.D. : Normal Vaginal Delivery

\*C.S. :Cesarean section

This table show the numbers of congenital anomalies was 23 case, from 1054, while number of normal pregnant women was 1031, and show the type of delivery.

**Table 3: Type of congenital anomalies for study sample.**

Type of congenital anomalies	No.	Visit to doctor	
Congenital heart	4	regular	710
Spin bifida	6	irregular	290
Hydrocephalus	2	indeed	54
Cleft lip	3		
Microcephaly	1		
Anencephaly	3		
Multiple congenital	2		
Ambiguous external genitalia	2		

This Table show the common type of congenital anomalies in this present study was spin bifids.

**Table 4: Statistical differences between congenital anomalies and type of delivery.**

Congenital anomalies	Normal vaginal delivery		Cesarean section		X <sup>2</sup> & P-Value	Value
	NO.	%	NO.	%		
No	411	38.9	620	58.8	X <sup>2</sup> =P<0.05 Significant X <sup>2</sup> table=3.841	15.2
Yes	13	1.2	10	0.9		
Total	1054					

Table (4) reveals that there was an association between the congenital anomalies and type of delivery in the normal vaginal delivery was (13) while in cesarean section, the number was (10).



congenital anomalies (congenital heart defect, urinary tract anomalies, oral cleft, limbs defect and pyloric stenosis).

The present study was revealed that the percent of normal deliveries (38.9%), while in cesarean sections (58.8%). In normal deliveries the percent of congenital anomalies was (1.2%), and the percent of congenital anomalies in cesarean sections was (0.9%). There was a significant association between the normal delivery and congenital anomalies as show in table (4).

The causes of high percent (39.1%) in congenital neonates at (21-25) years old (table 5) may be due to the hormonal imbalances. Our suggest not complete maturation of female reproduction system.

Our finding was coincides with previous worker (9), they reported, the doses of folic acid should be adjusted according to the patients history and requirement. (15)Our finding was importance in cases nutritional factors in addition to genetic role in the etiology of neural tube defects. Despite about two decades past the administration of folic acid in reproductive age women and in programmed pregnancy by the healthy system, some factors such as low doses of consumption, gastrointestinal disorders and lack of knowledge about the importance of folic acid in normal development of fetus can affect the success of this important program.

Women require more vitamins and minerals during pregnancy and supplements can improve their nutritional and haemoglobin status. Supplements also help improve and maintain functional immunity (16).

## **CONCLUSION:**

The study concluded that the pregnant women must take folic acid regular especially in first three month.

## **RECOMMENDATION**

- 1-Controlling and improving of nutritional behavior during pregnancy.
- 2-Establishing nutrition counseling center concerned with baseline information about health nutrition contained folic acid for pregnant women with or without risk factor.
- 3-The health team must take the role to advised women to taking folic acid before and during pregnancy.
- 4-Using different mass media to stimulate public awareness about risk factor of congenital anomalies part by malnutrition.
- 5-Further studies should be made to find the national parlance of congenital anomalies.

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