Survey of malformations at birth in Al-najaf Al-ashraf province

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الخلاصة

أجريت هذه الدراسة المسحية لجمع حالاتالتشوهات الخلقية للسنوات2005, 2006, 2007 و 2008 الولادات الحية في مستشفى الولادة والأطفال في محافظة النجف الاشرف حيث كانت النتائج 378حالة تشوهات(تشوهات الدماغ والحبل الشوكيالصلب الأشرمصغر حجم الرأس,تشوهات الجهاز القلبي الوعائيفلج الشفة,تشوهات الجهاز الهيكلي , استسقاء الرأس , تشوهات الجهاز الهضمي)من مجموع 9653 ولادة حية كانت منها 222 بنسبة (58,7%)حالة من الإناث بينما الذكور كانوا 158حالة بنسبة (41,3%)أما على أساس توزيع الحالات اعتمادا على سنوات الدراسة فكانت سنة 2006أكثر السنوات تكرارا واقلها كانت سنة 2008 أظهرت نتائج هذه الدراسة وجود أعلى نسبة من تشوهات الدماغ والحبل الشوكي واقلها هي حالات الصلب الأشرم وعلى مدار سنوات الدراسة في عام 2005 كانت أكثر حالات التشوه (19)حاله الأمهات تتراوح أعمارهن 20-24 سنةأما عام 2006 فكان عدد الحالات (69) حاله لأمهات تتراوح أعمارهن 40-44سنة بينما شابهت سنة 2007 سنة 2006 بان أكثر فئة عمرية هي 40-44في حدوث الحالات أما عام 2008كانت أعلى نسبة فيها هي للفئة العمرية 25-29 سنة (35,3%).

Abstract

This study was conducted surveys to collect cases of congenital anomalies of the years 2005, 2006.2007 and 2008 live births in the maternity hospital and children in the province of Najaf, where the results were 378 cases deformation (deformation of the brain and neural tube defect, small head size, congenital cardiovascular, lip clefts, palate clefts, the structural defects, hydrocephalus, malformations of the digestive system) of the total 9653 live births, which was increased by 222 (58.7%) case of females, while males were increased by 158 cases (41.3%).

The on the basis of the distribution of cases, depending on years of study was the year 2006, more frequent and the least of the past year 2008.

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The results of this study showed a higher rate of malformations of the brain and spinal cord and the least of which is the spine bifida Over the years of study. In 2005, the more abnormalities (19) the case of mothers aged 24-20 years, but 2006 was the number of cases (69) status of mothers aged 44-40 years, while the year 2007 resembled 2006 more than that age group is 44-40 in the occurrence of cases, and the year 2008 were the highest in the age group 29-25 years (35.3%).

Introduction

Congenital malformations are a major cause of perinatal and neonatal death, both in developed and developing countries . These malformations have multifactorial etiologies and 40% of cases are idiopathic, but there is an impression that they are more prevalent in populations with consanguineous marriages.(1) Epidemiologic surveys of congenital malformations in various part of the world and among different ethnic groups with widely varying marital habits, socioeconomic status and environment not only help in understanding the frequency of malformations in specific areas but also contribute to the general knowledge about the predisposing factors and different patterns of congenital malformations. (2)

There may be regional variations in the rate and pattern of congenital malformations or these could vary over time. In the Islamic Republic of Iran were the musculoskeletal system defects came second in frequency in 22.0%,infants with congenital heart disease was 14.7% (3).

The prevalence of congenital malformation (30.9/1000) is consistent with reports from Atlanta, United States (31/1000 live births) and Giza, Egypt (31.6/1000), close to results from a hospital in Tehran, Islamic Republic of Iran (35/1000) and Al-Hasa, Saudi Arabia (33.4/1000) and higher than other studies in Spain (20.23/1000) and India (27.2/1000) but lower than the 3.8% and 4.7% reported from Copenhagen, Denmark and British Colombia, Canada respectively.(4)

While infections and malnutrition are the dominant causes of infant morbidity and mortality in the poorer countries of the world.(5), in the developed countries these causes are cancer, accidents and congenital malformations.(6)(7).In Saudi Arabia, rich and fast-developing nation with a very effective expanded program on immunization, childhood

malnutrition has virtually been eradicated and infection is fast disappearing ;and therefore ,congenital malformations, accidents and cancer will rank as major childhood health problems.

There is frequent association of congenital heart disease (CHD)and urinary tract anomalies (UTA)according a large number of studies(8) .The incidence of UTA in the general population is about 10%,ranging between 2% and 18.4%.(9).The association of UTA with CHD has been well documented by many studies(10).On the other hand ,most UTA are silent even through potentially significant .Therefore ,there may be some serious complication during the operation or posoperation period. This study examines the incidence of UTA in children with CHD and the value of the cineurogram taken after angiocardiography to screen for coexistence. (11)

Aim of study

This study was aimed to survey the number of congenital malformation in Al-najaf Al- ashraf province through out all data which be collected from hospital.

Materials and methods

This surveillance study carried out to collected all cases of congenital malformations for delivery and classify the etiologies of malformations in neonates which happened in maternal & childhood hospital in Al-najaf Al-ashraf province for years 2005 ,2006 ,2007 and 2008 is designed to model the questionnaire (1), to collect information about malformation cases.

Result

The results of this study that the number of cases of deformity during the years of study 2005,2006,2007,2008 amounted to 428 out of a total of 9653 live births. The highest number of cases of deformity frequently is the year 2006 from the remaining years of the study, we find that the rate of malformations in births females more than males by 55.7%,show in table(1). It also appeared that the abnormalities in the brain and spinal cord were the most frequent in all the years of study and the least frequent was the clefts lip and palate clefts in succession show in

table(2). When you make a comparison on the basis of age group of birth mothers, we find that in 2005 was more than age group 20-24 is the ratio of (31.6) The year 2006 was the highest age group is 40-44 years by 50% , while in 2007 resembled that in 2006 the age group of mothers took place in its tool congenital malformations were 40-44 years by 50%. Finally in 2008 were the highest age group of 25-29 years are mothers by 35.5%.

The results also showed that there is a wide spectrum of congenital malformations occurred in 2006, unlike the rest of the years of study. Show in table (3,4,5&6).

Table (1) The distribution of malformation cases according to the gender and years

years	gender				Total
	No. of Male	%	No. of Female	%	
2005	25	43.9	32	56.1	57
2006	39	28.3	99	71.7	138
2007	63	47.7	69	52.3	132
2008	29	56.9	22	43.1	51
Total	156	41.3	222	58.7	378

Table (2) The distribution of malformation cases according to years

Type of malformations	years			
	2005	2006	2007	2008
Malfor. In brain & spinal cord	21	56	32	11
Head dropsical	19	24	12	11
Other	4	10	50	5
GIT	4	-	-	5
Sharing of head	-	20	4	7
Cardiovascular malformations	9	12	-	-
Spine bifida	-	10	10	5
Musculo-skeleton system	-	-	12	2
Cleft Lip	-	2	4	5
Cleft palate	-	4	8	-
Total	57	138	132	51

Table (3) The distribution of malformation cases in year 2005 according to the age group of mother

Mother Age group	Cardiovascular system	brain & spinal cord	Head dropsical	GIT	Other	Total	
						NO.	%
15-19	-	3	1	-	4	8	14
20-24	2	7	5	4	-	18	31.6
25-29	1	4	7	-	-	12	21
30-34	4	5	5	-	-	14	24.6
35-39	2	2	1	-	-	5	8.8
Total	9	21	19	4	4	57	100

Table (4) reveals the distribution of malformation cases in year 2006 according to the age group of mother

Mother Age group	Sharing of head	Cleft Lip	Cardiovascular System	brain & spinal cord	Head dropsical	Cleft palate	Spine bifida	Other	Total	
									NO.	%
15-19	2	-	1	7	2	-	-	2	14	10.1
20-24	2	-	1	5	3	1	2	2	16	11.6
25-29	4	1	3	5	5	-	-	1	19	13.8
30-34	2	-	1	8	2	-	2	-	15	10.9
35-39	-	-	-	3	-	1	1	-	5	3.6
40-44	10	1	6	28	12	2	5	5	69	50
Total	20	2	12	56	24	4	10	10	138	100

Table (5) The distribution of malformation cases in year 2007 according to the age group of mother

Mother Age group	Sharing of head	Cleft Lip	Musculo-skeleton system	brain & spinal cord	Head dropsical	Cleft palate	Spine bifida	Other	Total	
									NO.	%
15-19	-	-	-	3	-	-	-	1	4	3
20-24	2	1	1	5	1	-	3	3	16	12.1
25-29	-	-	2	4	3	1	2	8	20	15.2
30-34	-	-	2	2	2	2	-	10	18	13.6
35-39	-	1	1	2	-	1	-	3	8	6.1
40-44	2	2	6	16	6	4	5	25	66	50
Total	4	4	12	32	12	8	10	50	132	100

Table (6) The distribution of malformation cases in year 2008 according to the age group of mother

Mother Age group	Sharing of head	Cleft Lip	Musculo-skeleton system	brain& spinal cord	Head dropsical	GIT	Spine bifida	Other	Total	
									NO.	%
15-19	-	-	-	2	1	1	-	3	7	13.7
20-24	2	-	-	1	1	2	-	2	8	15.7
25-29	2	2	-	1	7	1	5	-	18	35.3
30-34	1	-	2	3	-	1	-	-	7	13.7
35-39	1	-	-	4	-	-	-	-	5	9.8
40-44	1	3	-	-	2	-	-	-	6	11.8
Total	7	5	2	11	11	5	5	5	51	100

Discussion

The results of this study that the number of cases of deformity during the years of study 2005,2006,2007,2008 amounted to 428 out of a total of 9653 live births in the maternity hospital and children in the province of Najaf. The highest number of cases of deformity frequently is the year 2006 from the remaining years of the study, may return this rise to the surface that occurred on the people of wars and subjected to explosions, chemicals, pollution, environmental and other, whereas we find that the rate of malformations in births females more than males by 55.7%. In Bahrain the congenital malformation caused by the joint action of genetic liability and environmental factors .(12). And there are many environment factors that at one time have been suspected of playing a role in the causation congenital malformations (13) . When you make a comparison on the basis of age group of birth mothers, we find that in 2005 was more than age group 20-24 is the ratio of (31.6) The year 2006 was the highest age group is 40-44 years by 50% , while in 2007 resembled that in 2006 the age group of mothers took place in its tool congenital malformations were 40-44 years by 50%.

It also appeared that the abnormalities in the brain and spinal cord were the most frequent in all the years of study and the least frequent was the clefts lip and palate clefts in succession. Truffle assurance our study the nural malformation (spina bifida) representative the highest percentage in malformation in Bahrain in 1995.But in Kashan , Islamic Republic of Iran was The most common malformations were genitourinary (32.1%), musculoskeletal (22.0%) and cardiovascular (14.7%). Of the total malformed infants, 8.3% died within the neonatal period. Male infants

were at greater risk for birth malformations.(14) , and (15) ensure that the high incidence of birth malformations was facial clefts: 20 (33%) with cleft lip, 15 (25%) with cleft palate and 25 (42%) with both. Congenital heart disease was the commonest associated anomaly (47%) identified, followed by skeletal abnormalities (13%). Renal anomalies were found in 10% of cases.When you make a comparison on the basis of age group of birth mothers, we find that in 2005 was more than age group 20-24 is the ratio of (31.6) The year 2006 was the highest age group is 40-44 years by 50% , while in 2007 resembled that in 2006 the age group of mothers took place in its tool congenital malformations were 40-44 years by 50%. Finally in 2008 were the highest age group of 25-29 years are mothers by 35.5%. The results also showed that there is a wide spectrum of congenital malformations occurred in 2006, unlike the rest of the years of study.

Conclusions

Results of this study showed the following:

1 - There are 378 cases malformation (the brain defects and neural tube defect, small head size, congenital cardiovascular, Cleft lip, palate Cleft, the structural abnormalities, hydrocephalus, abnormalities of the digestive system) of the total 9653 live births.

2 - which was increased by 222 cases (58.7%) were females while 158 were male case rate (41.3%).

3 - On the basis of the distribution of cases, depending on years of schooling in 2006 were more frequent and the least of the years 2008.

4 - The results of this study showed a higher percentage of brain malformations, spinal cord and the least of which is the Ashram of steel Over the years of study. In 2005 were more cases of deformity (19) the case of mothers aged 24-20 years, and in 2006 was the number of cases (69) has for mothers aged 44-40 years, while in 2007 resembled the year 2006 that are more age group 44-40 in the incidence of cases, and in 2008 was the highest in the age group 29-25 years (35.3%).

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