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Original Research Article

Depression among Parents of Children with Thalassemia in Babylon Province- Iraq During The Year 2014

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Abstract

Thalassemia is not uncommon chronic disease in developing countries including Iraq it poses a heavy burden on the health care system as well as the tremendous pressure and psychological stresses that the parents suffer due to the presence of children with thalassemia in their families.The objective of this study is to identify the difference of the level and the score of depression between parents with thalassemic children and the control group.

This was a case comparison study which included 300 parents , one hundred were considered as cases because they are parents of thalassemia children ,the control group included two hundred parents of healthy children, both groups are the attendees of Hilla children and maternity hospital in Babylon province during the period from the beginning of July through the end of November 2014 .

Data collection was done by interviewing the two groups using a structured valid questionnaire prepared by the r0esearchers after obtaining the consents of participants.Beck Depression Inventory score was applied to mea in both groups.

Results showed that there were a significant high depression scores among the parents of diseased children compared to parents of the healthy children($P<0.05$) , no significant relation was found regarding the place of residence , in conclusion thalassemia put a stressful pressure on Iraqi families with diseased children especially mothers , a psychosocial support program is strongly requested to help them .

Key words: Thalassemia, children, parents depressions, Iraq

الاكتئاب لدى اولياء امور الاطفال المصابين بمرض الثلاسيميا في محافظة بابل – العراق لعام ٢٠١٤

الخلاصة

الثلاسيميا مرض يشكل مشكلة صحية عامة لانتشاره غير القليل في الدول النامية ومنها العراق, يشكل هذا المرض عبئا على النظام الصحي واولياء امور الاطفال المرضى, دراسات عديدة تشير الى ان اولياء امور الاطفال الذين يعانون من امراض مزمنة او اعاقات يعانون من درجات اكتئاب اعلى من نظرائهم ذوي الاطفال الاصحاء. تهدف هذه الدراسة الى التحقق فيما اذا كان اولياء امور الاطفال المصابون بالثلسيميا يعانون من درجات اعلى بمقياس الاكتئاب من العينة الضابطة.

هذه دراسة حالات وشواهد ل ٣٠٠ اب وام منهم ١٠٠ من اولياء امور اطفال ثلاسيميا اعتبروا حالات و٢٠٠ اخرون من اباء وامهات اطفال اصحاء اعتبروا شواهد , انجزت الدراسة في مستشفى الولادة والاطفال في محافظة بابل للمدة من الاول حزيران ٢٠١٤ ولنهاية تشرين ثاني من نفس العام.

استعملت ورقة استبانة لجمع البيانات من المشاركين بعد استحصال موافقاتهم الواعية وطبق مقياس بيك لتحديد درجة الكآبة على المجموعتين من المشاركين (الحالات والشواهد).

اظهرت النتائج ان درجة الاكتئاب عالية جدا بين أولياء امور الاطفال المرضى مقارنة بالشواهد وبفارق احصائي معنوي مهم$p<0.05$, لم تظهر علاقة احصائية بين زيادة الاكتئاب واماكن السكن$p>0.05$. نستنتج من هذه الدراسة ان عوائل الاطفال المرضى تقع تحت ضغط نفسي شديد وتكون بأمس الحاجة الى برنامج اسناد نفسي اجتماعي تدخلي .

الكلمات المفتاحية: الثلاسيميا , الاطفال , اكتئاب اولياء الامور, العراق.

Introduction

Thalassemia's are particularly associated with people of Mediterranean origin, Arabs ,and Asians**[1]**.Thalassemia 'are inherited blood disorders. Significant advances have been made over the years on thalassemia leading to better understanding of the pathophysiology of the disease[2].This advanced improvement in management has not been matched by progress in psychosocial rehabilitation of thalassemia patients[3].Only limited progress has been made in the psychosocial developmental aspects of care in families with affected members [4,5]. Thalassemia poses challenges to patients and family members at the physical, emotional and cognitive levels leading to disruption of their normal psychosocial life. Persons with thalassemia trait have a normal life expectancy. Persons with beta thalassemia major usually have a relatively short life expectancy. Most deaths are caused by the cardiac complications of iron overload[6-8]. As such more attention is needed in issues related to knowledge and understanding of the disease,Lifelong compliance and adherence to chronic treatment regime [9].

Depression is a mental disorder that may be contributed to stressful conditions and present with different types of symptoms such as depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt, sleep disorders or decreased appetite, and poor concentration[10]which may lead to hopelessness and suicidal ideations or suicidal non-fatal or fatal attempts, psychological therapy , social and financial support of parents with chronically diseased children may help to manage these psychological problems or reducing the complications [11]. Patients with thalassemia major need regular blood transfusions in order to live resulting in iron overload , Therefore, they require the use of an iron chelation drug (Deferoxamine) starting between five and eight years of ag[12,13].

Although optimal medical treatment has reduced the challenges faced by patients, the psychosocial problems faced by them are now of primary importance[14,15].

This study was done to measure the levels of depression among parents of thalassemic cases compared with parents of healthy children and to asses possible factors associated with depression of parents of cases and control group.

Materials and Methods

Ethical issues were considered in this study by getting the approval of Babylon medical college, ethical committee .

The informed consents of the participants were taken as well as the acceptances of the authorities of the hospital and the health directorate of Babylon Province.

A case-comparison study was conducted from July to November, 2014 at the Children and Maternity hospital in Babylon province, Iraq.

A sample of 300 randomly selected parents selected using a systematic random technique, 100 were parents of thalassemic children(Attendees of Babylon thalassemia center)and 200 parents of non-thalassemic children (healthy group). The data were collected from parents of thalassemic and non thalassemic children (cases and comparison groups) by using a questionnaire; the first part of the questionnaire was filled by a trained interviewers which consisted of 26

questions about the parents, and 5 about their children; the second part of the questionnaire is Arabic and validated version of Beck's depression inventory-consisted of 21 questions and was filled by participants.

Beck Depression Inventory (BDI): Is valid and adequate in assessing the severity of depression in patients with ICD-10 diagnosis of depression[15].

It is an objective method for measuring the intensity of depressive symptoms[16]. For each question, if the answer "not at all" a zero score was given, if "occasionally" a 1 score was given, if "during several days" a 2 score was given, and if "every day" a 3 score was given. On the basis of the scoring card, 5 categories were formed as follows.

Depression score severity:

1 to 4; minimal.

5 to 9; Mild.

10 to 14; Moderate.

15 to 19; moderately severe.

20 to 27; Severe Depression [17].

The data were analyzed statistically by using SPSS version 20 which including frequency distribution, Means and Standards Deviation were measured. Odds Ratio (OR), Chi square, and t test were calculated to assess the associations between dependent and independent variables P<0.05was considered statistically significant.

Results

Table (1) shows that there are no statistical differences between the levels of education between parents of cases and control groups p>0.05

Table(2) shows there are an increase in the proportion of depression among parents of children with thalassemia in the urban region as compared to the dwellers of rural areas butthis difference does not reach thestatistical significant level>0.05,Chi-squa r= 0.234,df=1, p=0.628. Similar finding is shown regarding Beck depression inventory score (p<0.001) table (3).

Table (4) shows that there are a high statistical significant differencesbetween the mean of Beck depression inventory scores of parents of thalassemicchildren (of both sexes) as compared with means of the controls (t- test value=10.736, df =298 p value =0.001) this table also shows that there is a significant statistical difference between means depression score of parents of cases and control groups (p value <0.05).

Table (5)reveals that the Odds Ratio of having moderate to severe depression was (5.67) this means that parents of the diseased children were five times more liable to have severe and moderate depression than the parents of healthy children (Chi square= 33.167, p <0.01).

Table 1 : Frequency distribution of the study group by Educational level of Parents

Educational level	Cases		Control	
	Mothers	**Fathers**	**Mothers**	**Fathers**
	N (%)	N (%)	N (%)	N (%)
Graduated	12 (16.6)	4 (14.3)	27 (19.3)	15 (15)
Secondary	16(22.2)	7 (25.0)	28 (20.0)	20 (33.3)
Primary	41(56.9)	14 (50.0)	80 (57.1)	25 (41.7)
Illiterate	3(4..3)	3 (10, 7)	5 (3.6)	0 (0%)
Total	72 100%	28 100%	140100%	60 100%

P >0.05

Table 2 : Frequency distribution of levels of depression among parents of thalassemic patients by place of residence

	Urban N (%)	**Rural N (%)**	**Total N (%)**
Minimal to mild depression	8 (13.6)	7 (17.1).	15)15(
Moderate to severe depression	51 (86.4)	34(82.9)	٨٥(٨٥)
Total	٥٩ (%١٠٠)	٤١ (%١٠٠)	(%١٠٠)

Chi-square= 0.234,df=1, p=0.628

Table 3 : Frequency distribution of Beck's Scores of depression according to place of residence

	RuralN Mean ± S.D	**UrbanN** Mean ± S.D
Cases	21.07± 10.18 41	22.17 ± 11.73 59
Control	10.76± 5.63 83	11.32± 6.55 117

D.F 198 t test=0.6P>0.05

Table 4 : Difference between means of Beck's Score level of depression by gender

	Cases		Control	
Gender	N	Mean ± SD	N	Mean ± SD
Male	28	22.75± 11.71	60	11.13 ± 5.947
Female	72	21.43± 10.903	140	11.07 ± 6.225
Total	100	21.80 ± 11.090	200	11.09 ± 6.178

Calculated t =10.7, df 298, p<0.05

Table 5 : Frequency distribution and Odds Ratio of levels of depression

Level of depression	Cases	Control	Total
Moderate to severe depression(score)	86 (86%)	104 (52%)	190
Minimal to mild depression (score)	14 (14%)	96 (48%)	110
Total	100 100%	200 100%	300

Chi Square 33.187, P value 0.0001, Odds Ratio 5.67
t test 10.73 P value 0.001

Discussion

This study reflects the effects and the burden of thalassemia on families mainly the psychological stresses on parents. Thalassemia is a chronic disease of children which required frequent blood transfusion [8].Thalassemia is not uncommon disease in Iraq, thousands of Iraqi children are delivered with this disease[19].

This study explains that parents of thalassemic children have lower levels of education as compared with the control group this finding is similar to the finding of other study carried out in Pakistan by Aziz K et al(18), this may explain the un awareness of poorly educated parents about the hereditary causes of this chronic diseases and the hazardous effects of consanguineous marriage in addition ,poorly educated parents cannot address properly the problems of chronically ill children [20,21].

Our study shows that there is a marked difference between the depression intensity between the two groups (the score is remarkably higher among parents of thalasemic children), this finding agrees with the finding other researchers in a similar study conducted in Iran Tehran during the year 2012 who reported that the depression score of mothers of thalasemic children was significantly higher as compared with mothers of normal children [22] this could be explained by the important roles the mothers use to play in looking after their chronically ill children and sometimes might leave their job. Thus, they may suffer even more psychological disorders than fathers and are at higher risks of depression[23]. The result of this study is in line with findings of other studies carried out in other Arab country [24],as in Jordan study which showed that the main causes of psychological stresses of Jordanian

mothers of thalassamic children were the exaggerated worries and fears raised from the ill childs' school absenteeism, change in the child image, fear of death and the uncertainty about childs' future [25,26]. Depressions are correlated strongly with suicide, suicide in Muslim countries is very rare but there is evidence that it is increasing both the suicidal ideations and suicidal attempts (non-fatal and fatal) parents of children having chronic diseases [27]. According to WHO ,suicide is a third leading cause of death among people aged 15-44 years [28].

The findings of this study show that there were no significant difference between depression of mean scores of parents livening in urban and rural areas this may be explained that the fears and worries of this social economic serious diseases put a heavy burden on parents in different families in all sectors of the community similarly or it may be due to the absence of clear cut boundaries between Iraqi rural and urban regions due to urbanization of the Iraqi society or it may be related to the small sample size of this study**.**

Conclusion

In conclusion the current study shows that parents of children with thalassemia are highly affected by the burden of this chronic disease, the score of depression (Beck depression) is significantly higher among cases as compared to control group. Place of residence has no relation to the degree of depression between the two groups.

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