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Assessment of Parental Knowledge About Beta Thalassemia in Dhi Qar Governorate (Iraq)

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Abstract

Thalassemia is a genetic disorder that prevents the body from producing enough functional globin chains. There is no globin production at all in children with eta-thalassemia major. Objectives: assessing parental ' knowledge regarding beta thalassemia in a hereditary anemia center in Thi-Qar Governorate (Iraq). Methods: A descriptive analytical study was designed to assess parents' knowledge and beliefs about thalassemia in genetic disease center in Nasiriya city, and the study started from December 29, 2021 to December 21, 2022, A non-probability (targeted) sample consisting of (300) from the parents of Thalassemia patients who used to attend the Genetic Diseases Center for clinical examination and blood transfusion. Results: Study results show that there is There is a huge difference in the overall key areas involved Parents' knowledge of beta thalassemia major. In addition, there is a statistic The relationship between parents' knowledge in relation to their ages. There is also a highly significant relationship during the parental incubation period. knowledge in relation to their educational level.

Keywords:

Assessment, Parental Knowledge, Parental Attitudes, Beta Thalassemia.

Introduction

Haemoglobinopathies constitute the most common recessive monogenic disorders worldwide. These disorders can be divided into two categories: thalassemia syndromes and structural hemoglobin variations) [1]. A set of inherited hemoglobin synthesis disorders known as thalassemia hypochromic microcytic anemia that ranges in severity that can be caused by partial or whole failure in the generation of one or more globin chains [2].

Globin chain synthesis is controlled by two betas and four alpha genes. Each gene mutation produces a distinct phenotype of variable severity, with beta gene abnormalities creating the more serious effects known as Cooley's anemia[3]. Due to its widespread occurrence, inherited hemoglobinopathy caused by mutations in beta genes, β thalassemia, is the most frequent type of thalassemia in the world [4]. About 4.4% of every 10,000 newborns are diagnosed with thalassemia [5]; boys and females are equally affected. Annual symptomatic cases are estimated at 1/100,000 worldwide and at 1/10,000 in the European Union.

On the other hand, there is a paucity of trustworthy data on carrier rates in many populations, particularly in areas of the world that are now experiencing an outbreak of the disease or are predicted to experience high levels of transmission[6].

β -Thalassemia is highly prevalent some areas in the world, particularly countries around the Mediterranean, those in the Middle East, Asia proper, including India and China, and South America [7]. Even if this pattern is changing, due to migration movements [8, 9].

However, despite all these efforts to reduce the burden of β-thalassemia in countries where it is highly prevalent, such as Iraq, there is still an important lack of knowledge and awareness about it, among general population as well as thalassemia children's parents [10, 11].

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Method

This study is a part a non-probability (targeted) sample consisting of (300) from the parents of Thalassemia patients who used to attend the Genetic Diseases Center for clinical examination and blood transfusion.

Measures

The Pearson correlation coefficient was used to find out the significant relationships and variance between the variables of the study, which we were able to make an estimate of its reliability.

Stages of Change Scale

The study tool also includes theoretical measures for evaluating parents' attitudes towards beta thalassemia (a short form), which includes twenty questions, each question represents of the parents' Knowledge towards beta thalassemia. Questionnaires are commonly used in research to gather data efficiently and systematically

Results

Parental Knowledge about Beta thalassemia

Table 1: Assessment of parental knowledge about beta thalassemia

Items	Correct		Incorrect		M.S.	S.D.	Ass.
	F	%	F	%			
1.Thalassemia is a genetic disorder	242	77.8	69	22.2	0.78	0.416	H
2.Thalassemia is an infectious disease	239	76.8	72	23.2	0.77	0.422	H
3. Mixed marriage is an important risk factor for thalassemia	121	38.9	190	61.1	0.39	0.488	L
4.Thalassemia is a sexually transmitted disease	171	55.0	140	45.0	0.55	0.498	M
5. Thalassemia is a disease that affects the	208	66.9	103	33.1	0.67	0.471	M
6. Swears pieces beta thalassemia	117	37.6	194	62.4	0.38	0.485	M
7. For a child to be born with thalassemia major, he needs:	118	37.9	193	62.1	0.38	0.486	M
8. Thalassemia is a hereditary disease	210	67.5	101	32.5	0.68	0.469	H
9. Thalassemia major problems are due to	199	64.0	112	36.0	0.64	0.481	M
10. Thalassemia can be identified by:	133	42.8	178	57.2	0.43	0.496	M
11. Individuals with thalassemia major suffer	200	64.3	111	35.7	0.64	0.480	M
12. The main treatment for thalassemia	197	63.3	114	36.7	0.63	0.483	M
13. Thalassemia can be cured beta using	180	57.9	131	42.1	0.58	0.495	M
14. Frequent blood transfusions may expose your child to:	157	50.5	154	49.5	0.50	0.501	M
15. Children with thalassemia major- They lead	163	52.4	148	47.6	0.52	0.500	M
16. One of the most important complications of thalassemia major	208	66.9	103	33.1	0.67	0.471	M
17. Children with thalassemia major are more likely to be infected	118	37.9	193	62.1	0.38	0.486	M
18. The main cause of death in children with thalassemia major is:	152	48.9	159	51.1	0.49	0.501	M
19. The correct nutrition of injured child B thalassemia Grand	188	60.5	123	39.5	0.60	0.490	M
20. Can be prevented Thalassemia through	173	55.6	138	44.4	0.56	0.498	M

No. = number of item, F=frequencies, % = Percentages, M.S.= mean of score. Ass.= Assessment; Assessment levels : (0.00-0.33) = Low; (0.34-0.67) = Moderate; (0.68-1.00) = High.

Table (1) reveals that there is moderate level of arithmetic mean in all items related to assessment of parental knowledge about Beta Thalassemia at the study sample, except items (1. Thalassemia is a genetic disorder; 2. Thalassemia is an infectious disease; and 8. Thalassemia is a hereditary disease), it showed that high level of assessment.

Table 2: Overall assessment of parental knowledge regarding beta thalassemia

Levels of assessment	Frequency	Percent
Low : (0.00 - 0.33)	49	15.8
Moderate: (0.34 - 0. 67)	163	52.4
High: (0.68 - 1.00)	99	31.8
Total	311	100.0
$\bar{x} \mp$ Std. Dev	0.56 ± 0.220	

Arithmetic Mean ($\bar{x}$) and Std. Dev.= Standard. Deviation

This table reveals that the most of the participants have a moderate and high levels of knowledge assessment regarding beta thalassemia at the study sample (n=311; 163(52.4%) & 99(31.8%)) respectively, with mean and standard deviation (0.56 ± 0.220).

Discussion

The analysis of data shows that the more one-third of study sample concerning age group were within (1-5 years) it presented 125(40.2%). Addition, residence showed that more than half of participants were live in urban as their percentage reached 173(55.6%). With regard to educational level of father, it appears 86(27.7%) of the sample were primary graduate. In regarding to the subject's level of education of mother, the results show that more than two-third of participants were illiterate and primary graduate 210(67.6.8%). In addition, occupation status shows more than half of study sample 162(52.1%) were free business [12].

Addition, family type demonstrate half of participants were nuclear family as their percentage reached 158(50.8%). Relative with child of participants in study sample were more than the half 162(52.1%) were the mother [13]. The results of this table show that the more of three-quarters of the study sample were not suffer family history of thalassemia, it presented 241(77.5%).

Also in regarding to the number of children with beta thalassemia, the results show that 137(44.1%) of sample, they were having one child. Additional support is found by Cao and Angastiniotis et al. [9, 14] revealed that the most of his samples were between the ages was

28.62±7.12 years.

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