

Awareness Of Thalassemia In Male And Female Students.

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ABSTRACT

Objective:-Objective of this look at is to access the awareness stage of Thalassaemia in University college students. Method: Study design was chosen to be crosssectional prospective. Sample size for this study was taken as 64.

A wellstructured: data collecting form or questionnaire was created, analysed and filled out during the interview. The data was summarized using descriptive statistics. Results The total 64 cases of all age groups were enrolled in this study. The are 64 cases of all age group are involved in this study in which there are 21 male (32.8%) and 43 females (67.2%). In this survey out of 64 persons 53 persons know about thalassemia. 5 people know about thalassemia gene. 40 persons know that thalassemia is inherited from parents. 53 persons know that thalassemia is blood related disease. 45 persons know severe anaemia is the clinical presentation of thalassemia. 25 persons know about the permanent treatment of thalassemia. 37 persons know that thalassemia is treated by bone marrow transplantation. However, the study findings revealed that education status had a substantial impact.

Conclusion:- Females have more awareness about thalassemia then man.

Key Word: Thalassaemia, Haemoglobinopathy, Awareness.

Article Information

Received: September 25, 2022; Revised: October 12, 2022; Online: December, 2022

INTRODUCTION

Thalassaemia is a hereditary haemoglobinopathy due to the absence or decreased synthesis of either alpha or beta globin chain. Thalassaemia minor is defined by mild asymptomatic ,hemolytic anaemia with no clear clinical signs, whereas thalassemia major is characterised by severe anaemia symptoms that arise in the first year of life and necessitates the patient's life blood transfusion. Thalassaemia intermedia (TI) is depicted in the middle, which illustrates patients who display indications that are too mild to be classified as thalassemia major but are exceedingly serious, making it hard to be classified as thalassemia minor.

Thalasseмии are among the most prevalent genetic illnesses, affecting at least 60,000 people each year around the world.

Because of cultural factors and the family system, consanguineous marriages are highly widespread in our cultures. That's why every passing

day disease burden grows. People are hesitant to opt for premarital thalassaemia screening because of cultural norms, despite the fact that they are aware of the nature of inheritance having thalassaemia in first cousins, and despite the fact that current legislation in Pakistan requires premarital thalassaemia screening for every couple.

Repeated blood transfusions or permanent treatments, such as bone marrow transplantation, are two treatment possibilities. Blood transfusions are uncomfortable for the patient and have their own set of dangerous problems, while bone marrow transplantation is out of reach for the majority of people in developing countries.

As a result, prevention is the only method to avoid this socioeconomic burden.

The thalassaemias are a group of inherited hematologic illnesses that are caused by faults in the production of one or more haemoglobin chains. Thalassaemia is caused by a reduction in the synthesis of one or more of the globin chains that make up the haemoglobin (Hb) tetramers, or the complete absence of one or more of them.

MATERIAL AND METHODOLOGY

A cross-sectional approach was used for the Current study. This study method was chosen because it is low-cost and time-consuming, as a cross-sectional study is undertaken just at one precise point in time.

The study participants were all University students that were enrolled in the different universities of Pakistan and all the students were older than 18 years.

A self-administered questionnaire was developed based on the previous reports. The questionnaire was composed of two parts. The

first part consist of demographic details including gender and age.

While second part consist of questions regarding awareness of thalassaemia. A total 64 participants were enrolled in this study. Google form was used to create a questionnaire and a link was shared via social media platform.

RESULTS

The total 64 cases of all age groups were enrolled in this study. The mean value of age was found to be 24.13 ± 3.3550 with minimum age of 18 years and 30 years as maximum age range. The are 64 cases of all age group are involved in this study in which there are 21 male (32.8%) and 43 females (67.2%).

In this survey out of 64 persons 53 persons know about thalassaemia and 11 people have no idea about thalassaemia. (Table 3)

Out of 64 persons 5 people know about thalassaemia gene, 34 people have no idea about thalassaemia gene and 25 did not know about thalassaemia gene (Table 4)

Out of 64 persons 40 persons know that thalassaemia is inherited from parents 5 persons have no idea about it and 19 persons did not know about it. (Table 5)

Out of 64 persons 53 persons know that thalassaemia is blood related disease 2 persons have no idea about it and 5 persons didn't know about it (Table 6)

Out of 64 persons 45 persons know severe anemia is the clinical presentation of thalassaemia major, 19 persons did not know about it (Table 7)

Out of 64 persons 24 persons know that thalassaemia can be detected during pregnancy 10 persons have no idea about it and 30 persons didn't know about it. (TABLE 8)

Out of 64 persons 26 persons know that thalassemia carriers are symptoms free 12 persons have no idea about it and 26 persons didn't know about it (Table 9)

Out of 64 persons 26 persons know about screening test for that gene, 24 persons have no idea about it and 14 persons did not know about it (Table 10)

Out of 64 persons 49 persons know that thalassemia major children need blood transfusion 3 persons have no idea about it and 12 persons didn't know about it. (Table 11)

Out of 64 persons 06 persons did not know that thalassemia is spread by food , medicine or infection 38 persons know that and 20 persons have no idea about it (Table 12) .

Out of 64 persons 15 persons know that thalassemia is transmitted through blood 32 persons did not know and 17 persons have no idea about it (Table 13) .

Out of 64 persons 50 persons know that thalassemia carriers have a chance of producing thalassemia major baby 02 persons did not know about this and 12 persons have no idea about it (Table 14) .

Out of 64 persons 33 persons know that thalassemia is perverted before marriage 03 persons did not know and 28 persons have no idea about it (Table 15) .

Out of 64 persons 24 persons know that thalassemia is a curable disease 14 persons did not know and 21 persons have no idea about it (Table 16) .

Out of 64 persons 16 persons know about the aminocentesis test 34 persons did not know and 14 persons have no idea about it (Table 17) .

Out of 64 persons 34 persons know that regular blood transfusions is the only treatment 11

persons did not know and 19 persons have no idea about it (Table 18) .

Out of 64 persons 45 persons know that thalassemia is treated by giving blood to the patient 05 persons did not know and 14 persons have no idea about it (Table 19) .

Out of 64 persons 25 persons know about the permanent treatment of thalassemia 18 persons did not know and 21 persons have no idea about it (Table 20) .

Out of 64 persons 37 persons know that thalassemia is treated by bone marrow transplantation 01 person did not know and 26 persons have no idea about it (Table 21) .

Table 1_ Gender

Gender	Frequency	Percent
Male	21	32.8
Female	43	67.2
Total	64	100.0

Table 2_ Age

Group	Age	Frequency	Percent
	18	1	1.6
	19	1	1.6
	20	4	6.3
	21	13	20.3
	22	6	9.4
	23	5	7.8
	24	12	18.8
	25	2	3.1
	26	2	3.1
	27	4	6.3
	28	4	6.3
	29	3	4.7
	30	7	10.9
	Total	64	100.0

Table 3_

Have you ever heard of thalassemia?	Frequency	Percent
Yes	53	82.8
No	11	17.2
Total	64	100.0

Table 7_

Severe anemia is the clinical presentation of thalassemia major ?	Frequency	Percent
Yes	45	70.3
Dont know	19	29.7
Total	64	100.0

Table 4_

Do you have thalassemia gene ?	Frequency	Percent
Yes	5	7.8
No	34	53.1
Dont know	25	39.1
Total	64	100.0

Table 8_

Do you know thalassemia can be detected during pregnancy ?	Frequency	Percent
Yes	24	37.5
No	10	15.6
Dont know	30	46.9
Total	64	100.0

Table 5_

Thalassemia is inherited from parents ?	Frequency	Percent
Yes	40	62.5
No	5	7.8
Dont know	19	29.7
Total	64	100.0

Table 9_

Thalassemia carriers are symptoms free ?	Frequency	Percent
Yes	26	40.6
No	12	18.8
Dont know	26	40.6
Total	64	100.0

Table 6_

Thalassemia is the blood related disease ?	Frequency	Percent
Yes	53	82.8
No	2	3.1
Dont know	9	14.1
Total	64	100.0

Table 10_

Do you know about the screening test for thalassemia gene detection before marriage ?	Frequency	Percent
Yes	26	40.6
No	24	37.5
Dont know	14	21.9
Total	64	100.0

Table 11_

Thalassemia major children need blood transfusion ?	Frequency	Percent
Yes	49	76.6
No	3	4.7
Dont know	12	18.8
Total	64	100.0

Table 12_

Can thalassemia be spread by food , medicine or infection ?	Frequency	Percent
Yes	6	9.4
No	38	59.4
Dont know	20	31.3
Total	64	100.0

Table 13_

Can thalassemia is transmitted by blood ?	Frequency	Percent
Yes	32	50.0
No	15	23.4
Dont know	17	26.6
Total	64	100.0

Table 14_

A marriage between two thalassemia carriers have a chance of producing thalassemia major baby ?	Frequency	Percent
Yes	50	78.1
No	2	3.1
Dont know	12	18.8
Total	64	100.0

Table 15_

Can thalassemia be prevented before marriage ?	Frequency	Percent
Yes	33	51.6
No	3	4.7
Dont know	28	43.8
Total	64	100.0

Table 16 _

Is thalassemia is the curable disease ?	Frequency	Percent
Yes	29	45.3
No	14	21.9
Dont know	21	32.8
Total	64	100.0

Table 17_

Do you know about aminocentesis test ?	Frequency	Percent
Yes	16	25.0
No	34	53.1
Dont know	14	21.9
Total	64	100.0

Table 18_

Do you think regular blood transfusion is the only treatment ?	Frequency	Percent
Yes	34	53.1
No	11	17.2
Dont know	19	29.7
Total	64	100.0

Table 19_

Is thalassemia be treated by giving blood to the patients ?	Frequency	Percent
Yes	45	70.3
No	5	7.8
Dont know	14	21.9
Total	64	100.0

Table 20_

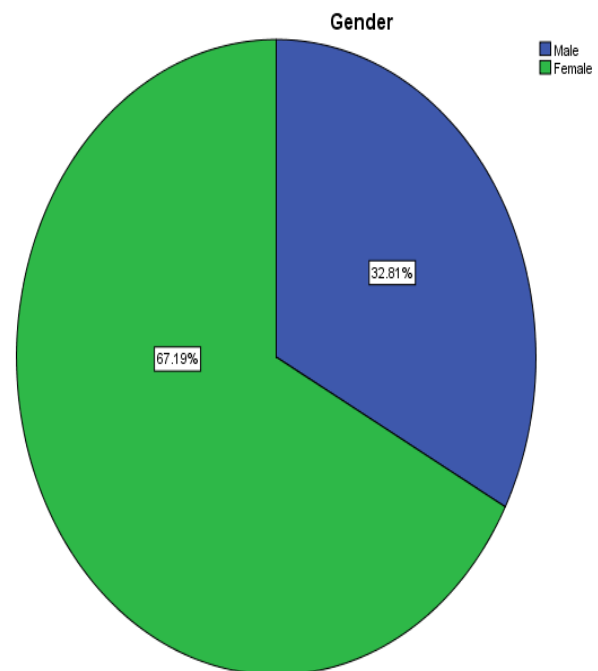
Is there any permanent treatment for Thalassemia ?	Frequency	Percent
Yes	25	39.1
No	18	28.1
Dont know	21	32.8
Total	64	100.0

Table 21_

Can thalassemia be treated by bone marrow transplantation ?	Frequency	Percent
Yes	37	57.8
No	1	1.6
Dont know	26	40.6
Total	64	100.0

Table 21_
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	64	1	2	1.67	.473
Age	64	18	30	24.13	3.350
Valid N (listwise)	64				



DISCUSSION

In Pakistan, thalassemia is the most common genetic disorder. This is most likely due to the lack of knowledge about the pre-marital and prenatal diagnosis of thalassemia.

Thalassemia has the potential to run in families . The majority of the participants in this study accurately stated that thalassemia is not a contagious disease.

Thalassemia is a blood illness that has not been linked to any hypersensitivity or allergic reaction. However, some people believe that the emergence of an allergic reaction can lead to hypersensitivity.

Patients with thalassemia major require regular blood transfusions, which causes iron to build up in numerous body organs, leading to the damage of the liver, heart endocrine gland and kidneys.

A person with thalassemia cannot live a normal life since he or she is always anaemic and requires blood transfusions, making him or her bedridden.

Education is a key predictor of an individual's knowledge; it alters one's perception of the world, as well as their attitudes and behaviours. A person with a higher education usually has more knowledge. In this study, educated people had superior knowledge responses in crucial health determinants such as health behaviours. Individuals are enhanced through education, which is a major determinant.

CONCLUSION

The basic diagnostic method for thalassemia is haemoglobin electrophoresis (Hb-electrophoresis). Thalassemia treatment comes with a slew of side effects.

All patients should have their CBC, serum ferritin, LFT, RFT, and serum calcium levels checked on a regular basis to assess the complications.

Patients with thalassemia require blood transfusions on a regular basis. Which results in iron overload in body.

The most often used iron chelator for treating iron excess is defesirox.

The most effective treatment is stem cell transplantation, which is out of reach for the majority of the population.

So, the greatest strategy to avoid thalassemia is to educate people about the necessity of prenatal and premarital thalassemia diagnosis.

REFERENCES

1. Galanello R and Origa R. Beta-Thalassemia Orphanet. *Journal of Rare Diseases* 2010; 5(11):1172-75.
2. Delea TE, Edelsberg J, Sofrygin O, Thomas SK, BaladiJF, et al. (2007) Consequences and costs of noncompliance with iron chelation therapy in patients with transfusion-dependent thalassemia: a literature review. *Transfusion* 47(10): 1919-1929.
3. Ahmed S, Saleem M, Modell B, Petrou M (2002) Screening extended families for genetic hemoglobin disorders in Pakistan. *New England Journal of medicine* 347(15): 1162-1168.
4. Muncie HL, Campbell JS (2009) Alpha and beta thalassemia. *American family physician* 80(4): 339-344.2. Cao A, Kan YW (2013) The prevention of thalassemia. *Cold Spring Harbor perspectives in medicine* 3(2): a011775.
5. Delea TE, Edelsberg J, Sofrygin O, Thomas SK, BaladiJF, et al. (2007) Consequences and costs of noncompliance with iron chelation therapy in patients with transfusion-dependent thalassemia: a literature review. *Transfusion* 47(10): 1919-1929.
6. Ahmed S, Saleem M, Modell B, Petrou M (2002) Screening extended families for genetic hemoglobin disorders in Pakistan. *New England Journal of medicine* 347(15): 1162-1168.
7. Shang X, Xu X (2017) Update in the genetics of thalassemia: What clinicians need to know. *Best Practice & Research Clinical Obstetrics & Gynaecology* 39: 3-15.
8. Baig SM, Azhar A, Hassan H, Baig JM, Aslam M, et al. (2006) Prenatal diagnosis of β -thalassemia in Southern Punjab, Pakistan. *Prenatal diagnosis* 26(10): 903-905.

9. BorgnaPignatti C, Rugolotto S, Stefano PF, Zhao H, Cappellini MD, et al. (2004) Survival and complications in patients with thalassemia major treated with transfusion and deferoxamine. *Haematologica* 89(10):1187-1193.
10. Borgna-Pignatti C, Rugolotto S, De Stefano P, Piga A, Di Gregorio F, et al. (1998) Survival and disease complications in thalassemia major. *Ann N Y AcadSci* 850(1): 227-231.
11. Haddad A. β -Thalassemia Intermedia: A Bird's-Eye View. *Turkish Journal of Hematology*, 2014, 31(1).
12. Maheen H. Assessing Parental Knowledge aboutThalassemia in a Thalassemia Center of Karachi, Pakistan. *Journal of genetic counseling*.
13. Feinstein L. 4. What are the effects of education on health? In measuring the effects of education on health and civic engagement